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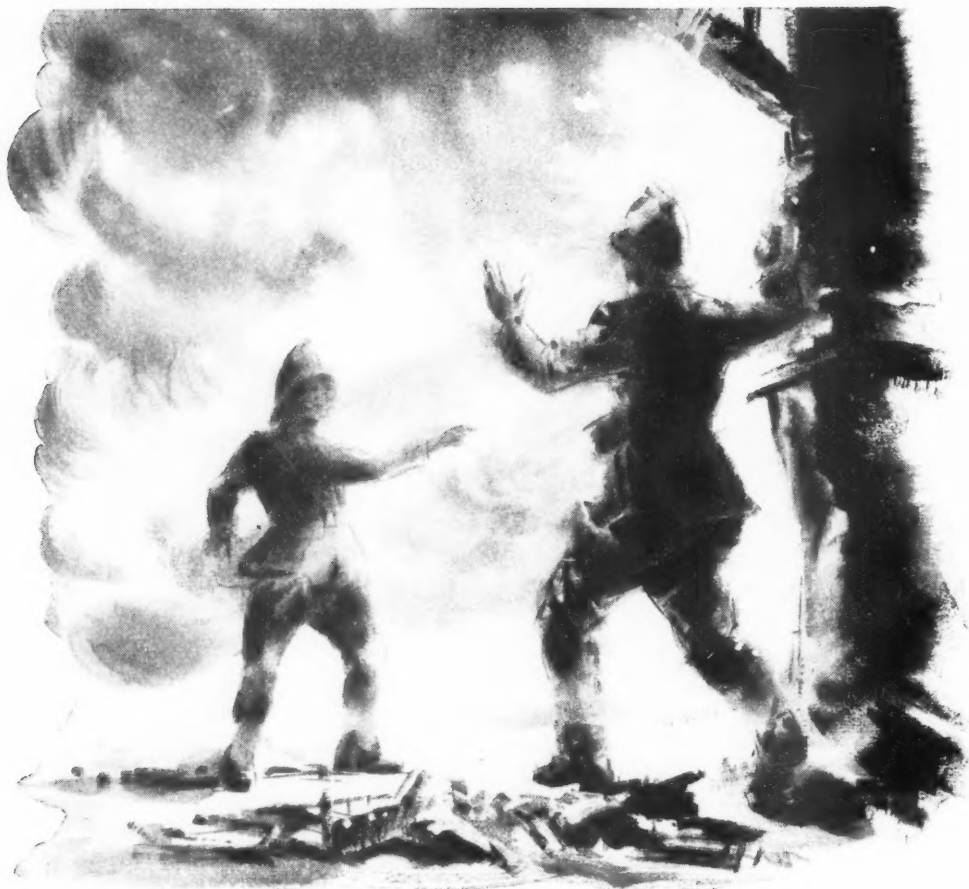
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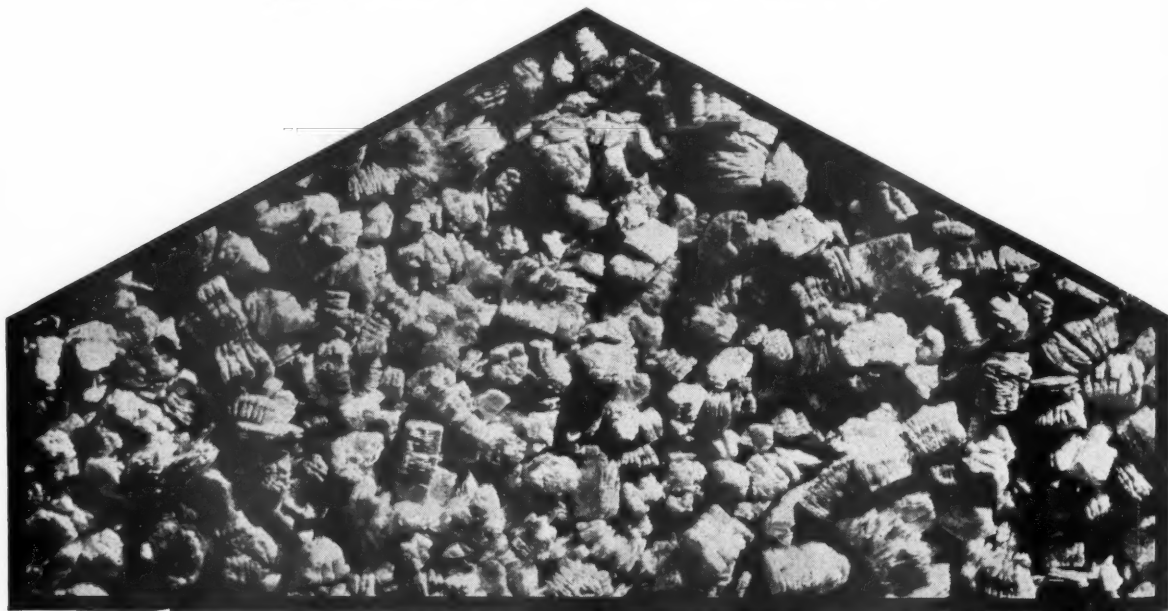
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Y.M.C.A. Building Croydon. Architect: F. Starling. B.A. A.R.I.B.A.

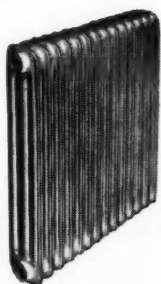
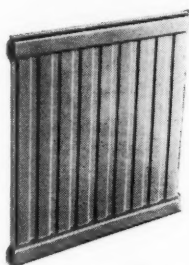
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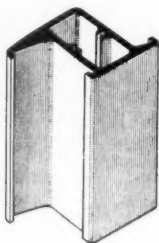
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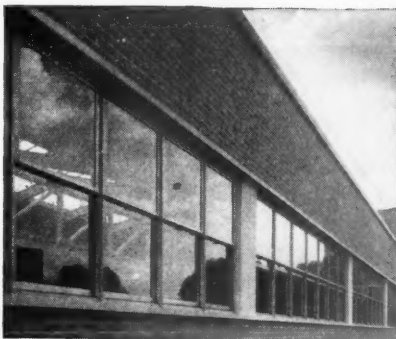
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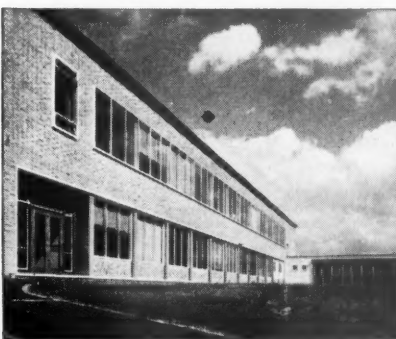


A typical example of an extrusion for aluminium windows.



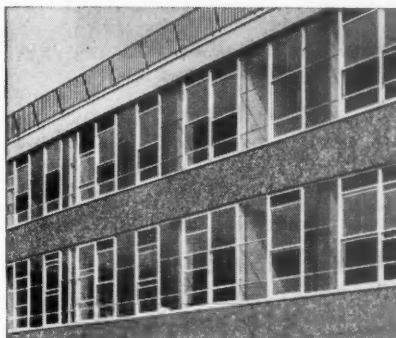
HOPE's aluminium double-hung sliding sash windows, made entirely from extruded sections were used in this Comprehensive High School for the L.C.C. at Wandsworth.

Architects: Hening & Chitty.



The B.O.A.C. Air Training School at Hounslow is another example of the use of aluminium windows. Here, HOPE's windows have been built into wooden frames.

Architect: F. Greenwood, A.R.I.B.A.



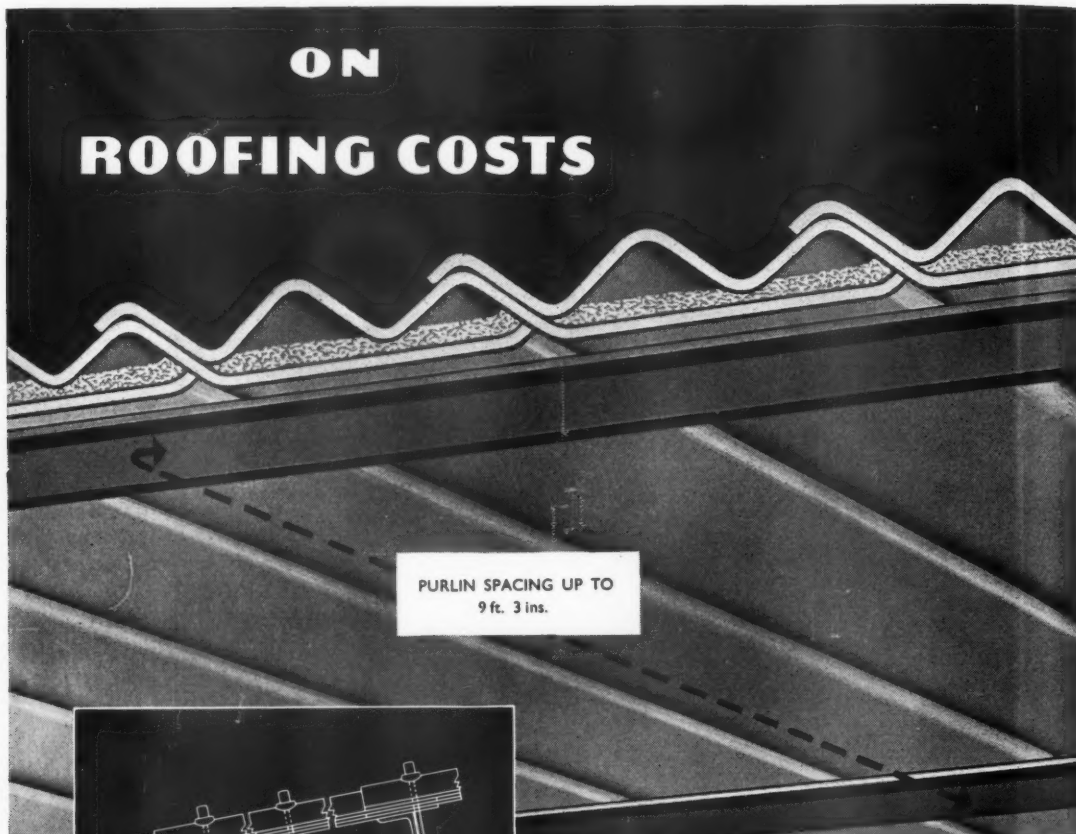
HENRY HOPE & SONS LTD., supplied the aluminium double-hung sash windows and aluminium casement windows for the Manor Laundry, Camberwell.

Architects: Stone, Thoms & Partners.

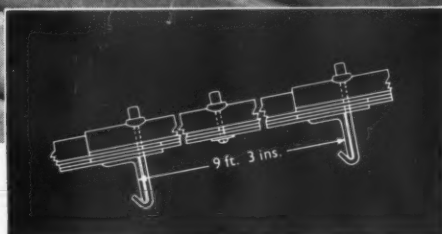
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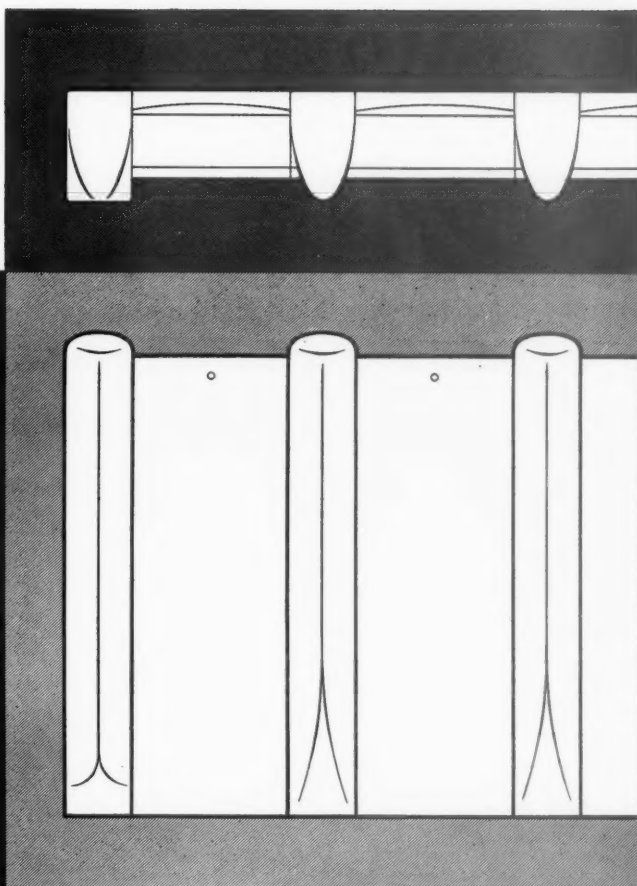
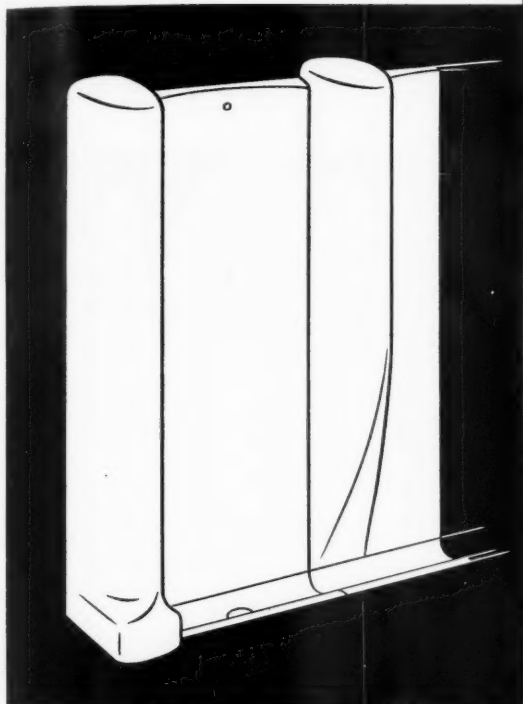
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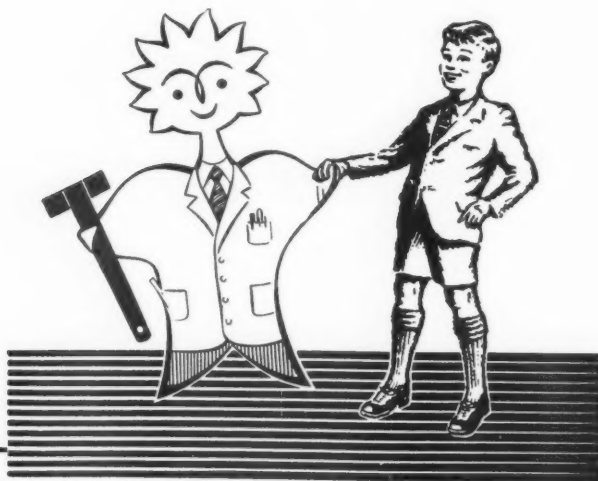
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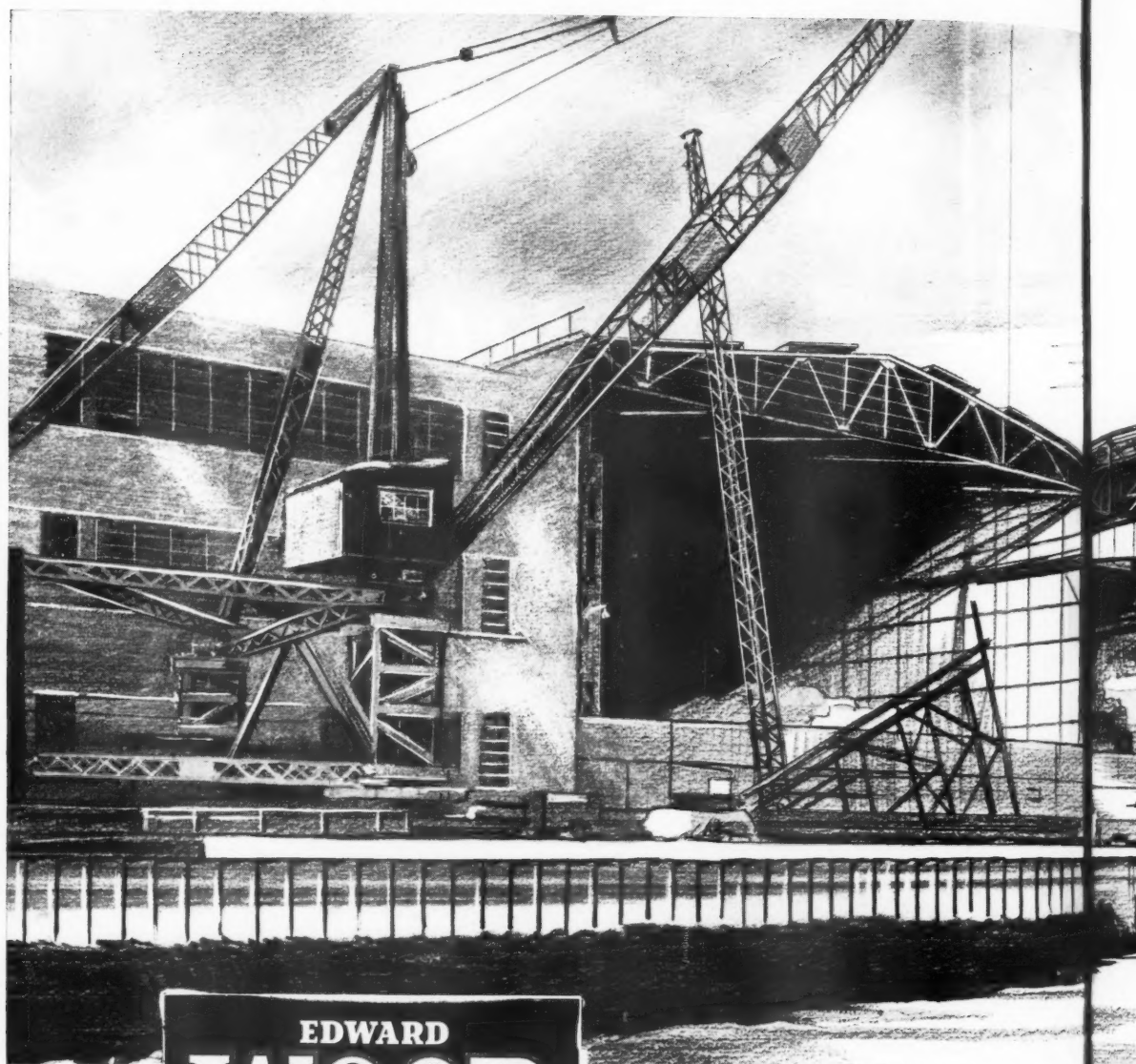
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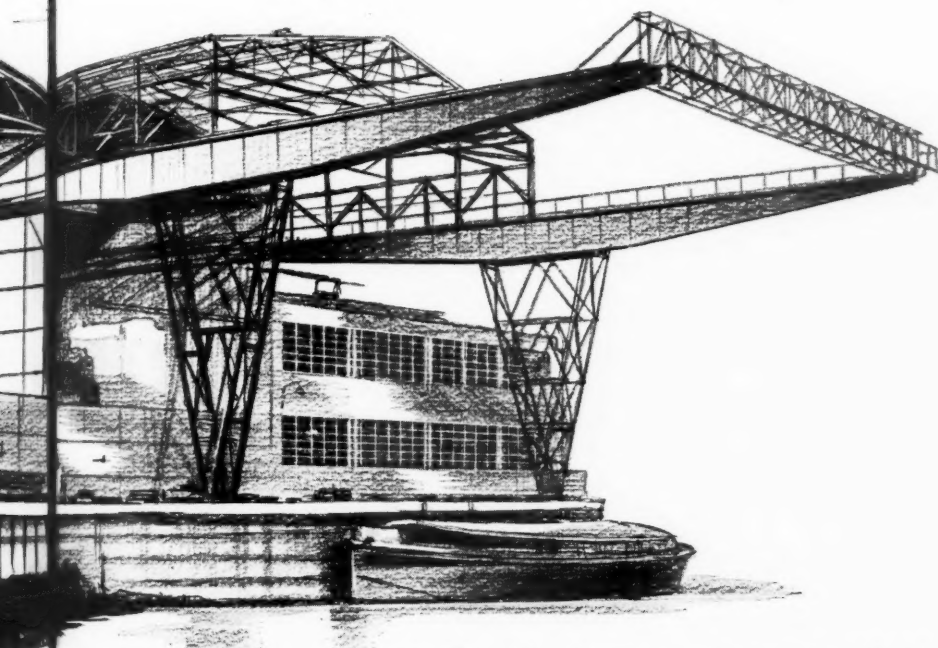
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*Architect:*  
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A.M.T.P.I., City  
Architect, Cardiff.

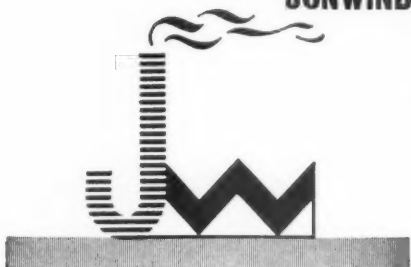
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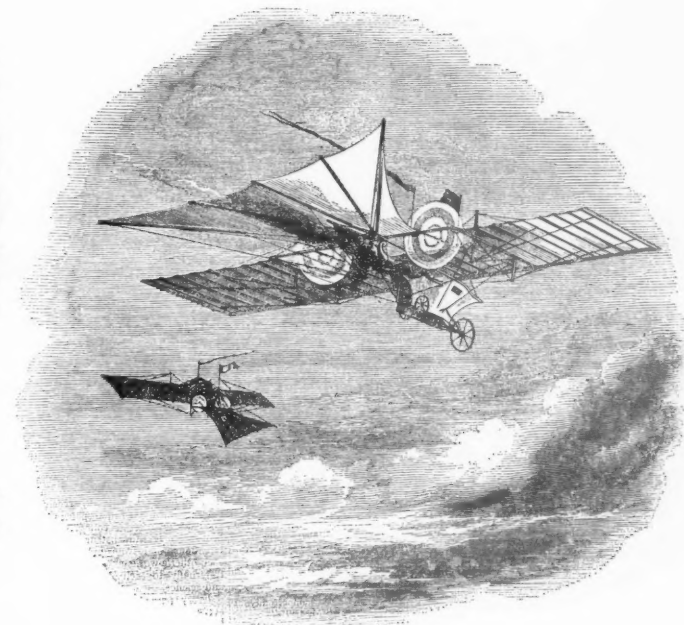
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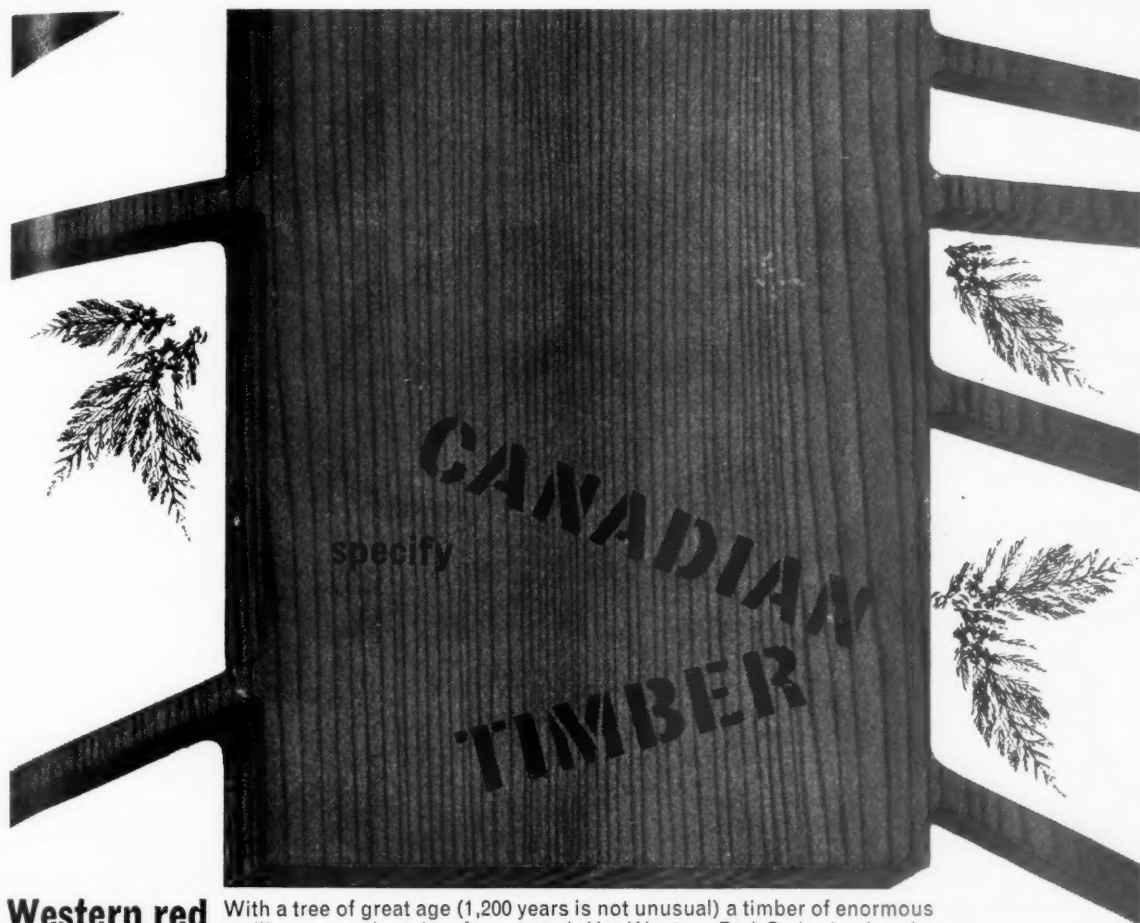
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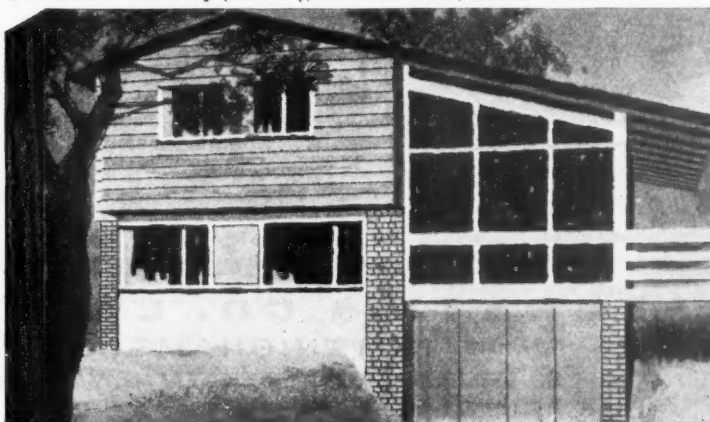




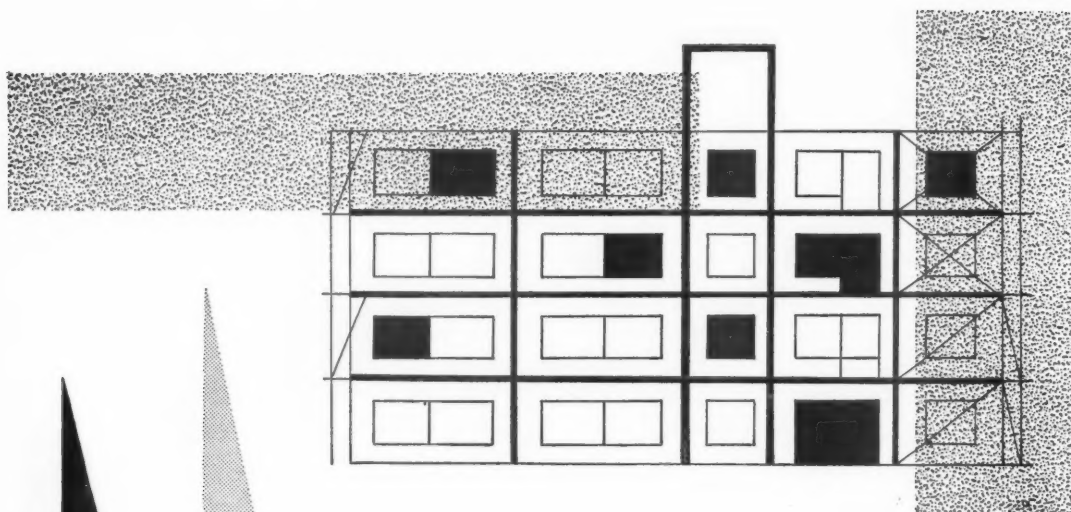


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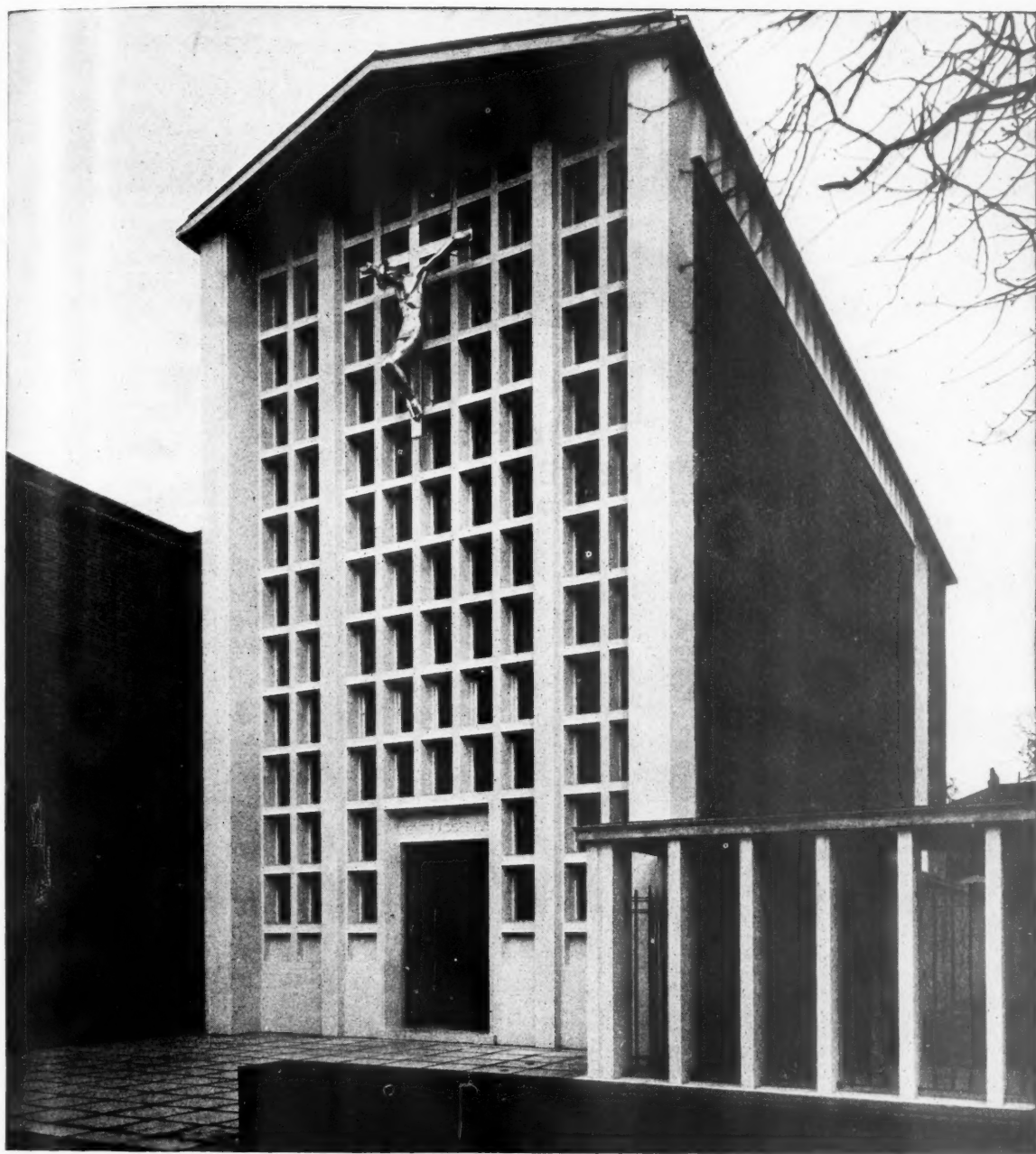
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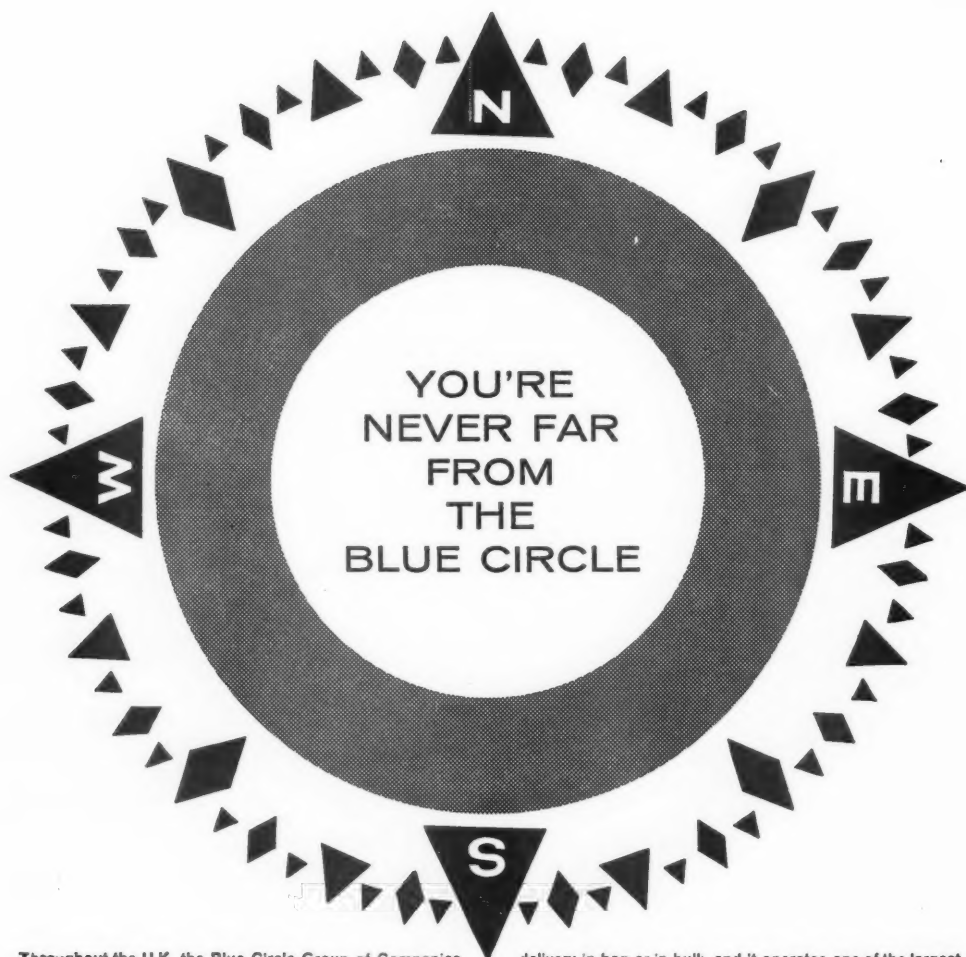
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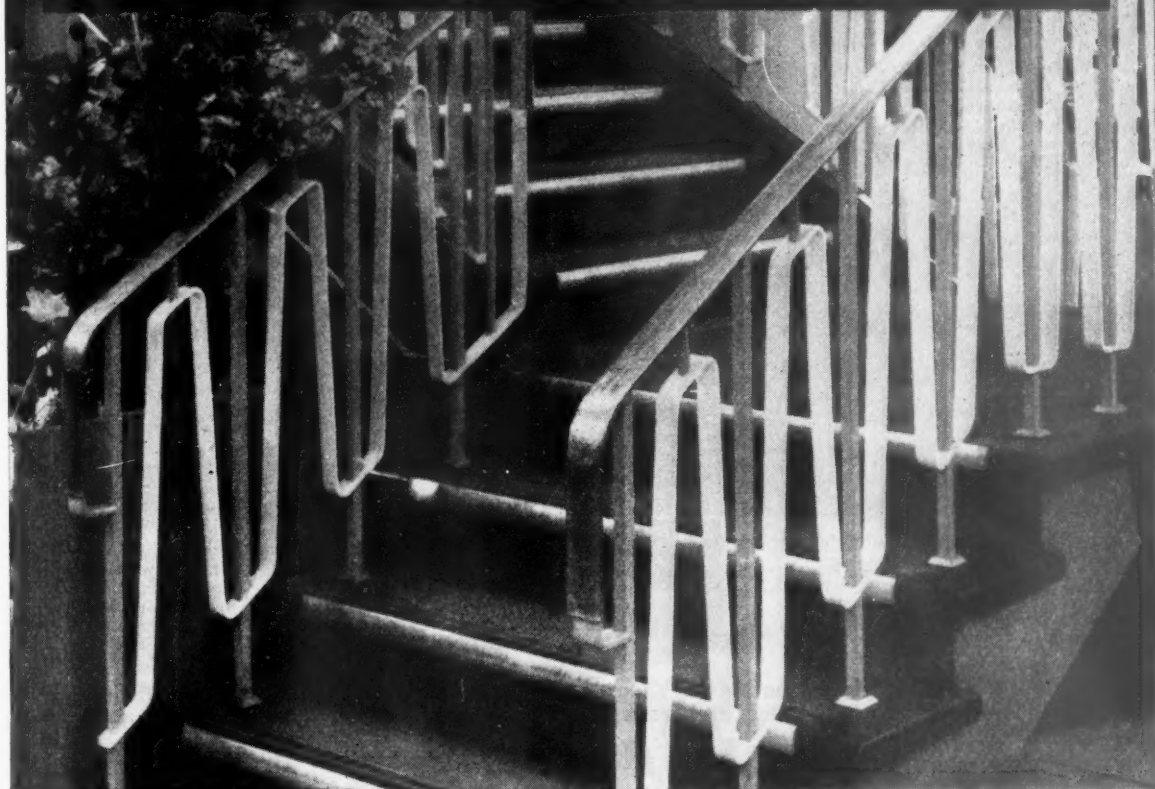


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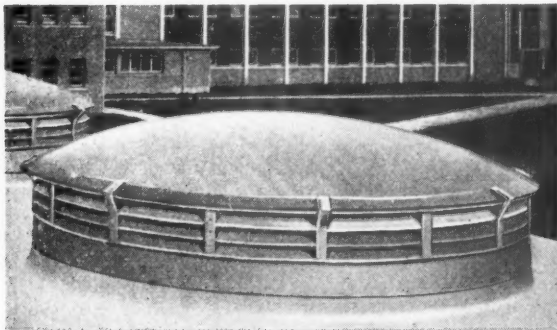
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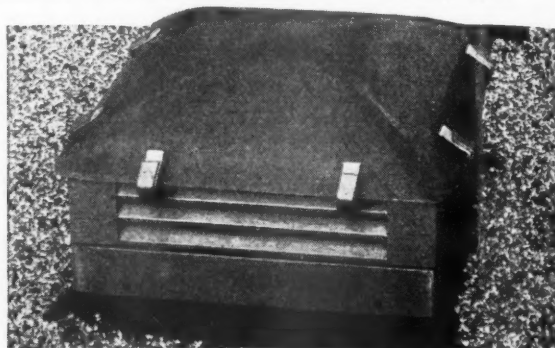
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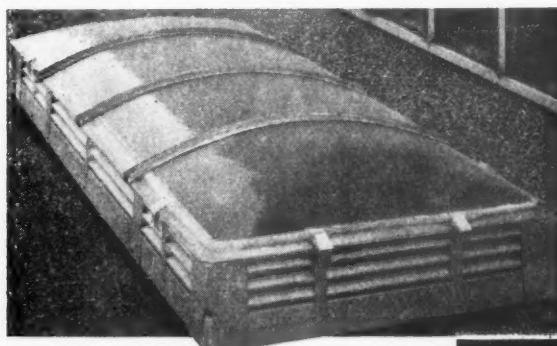
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This Half Dome End Continuous Rooflight Ventilator is one of twenty 8' 0" x 4' 0" units at S.E.G.B. Belvedere Generating Station, Kent. Available in extended lengths from 8 ft. with nominal widths up to 6 ft. (Architects: Farmer & Dark F/R.I.B.A.)



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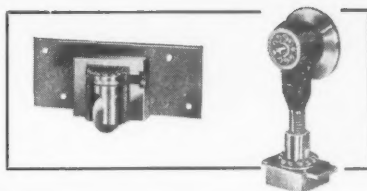
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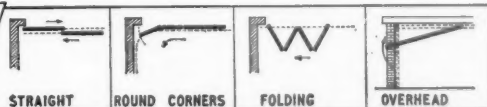
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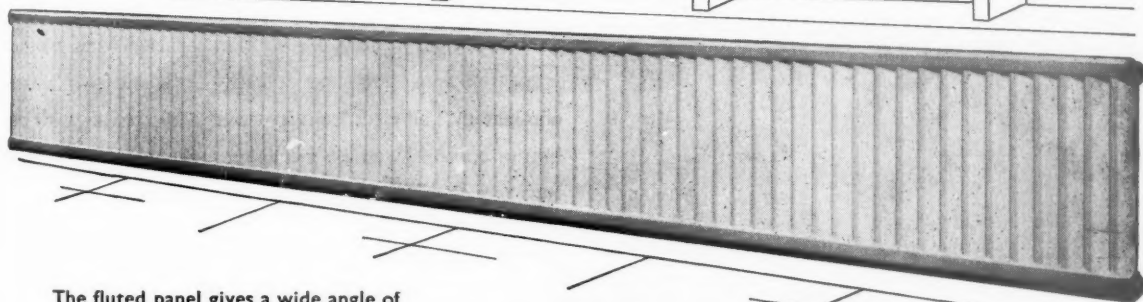
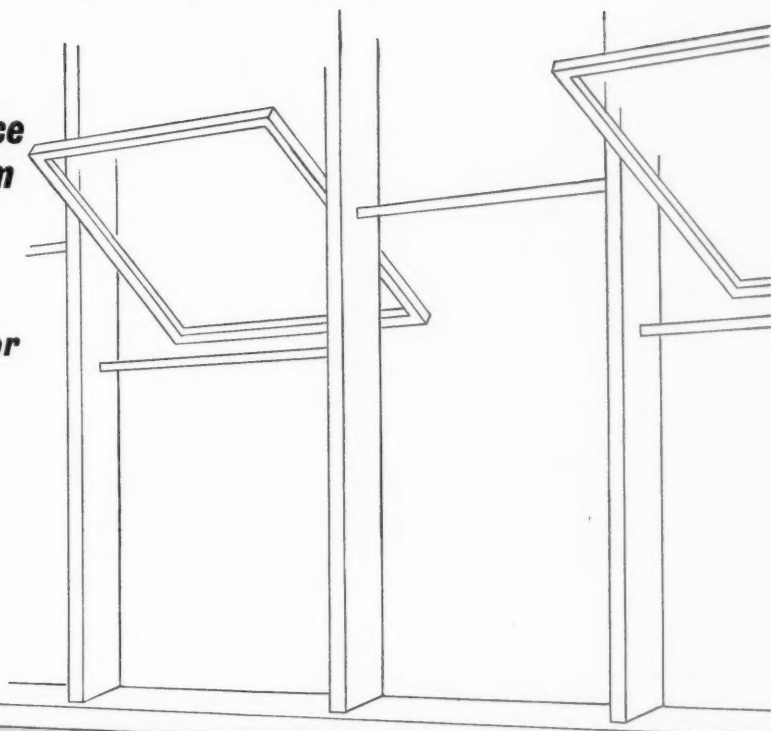
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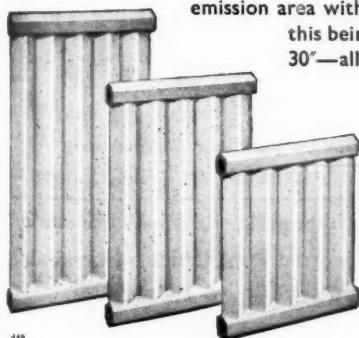
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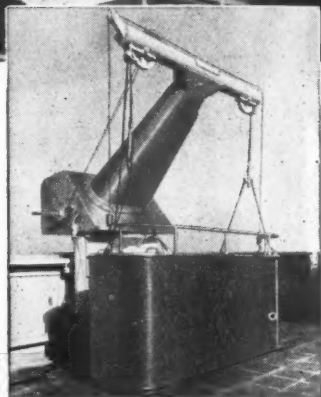
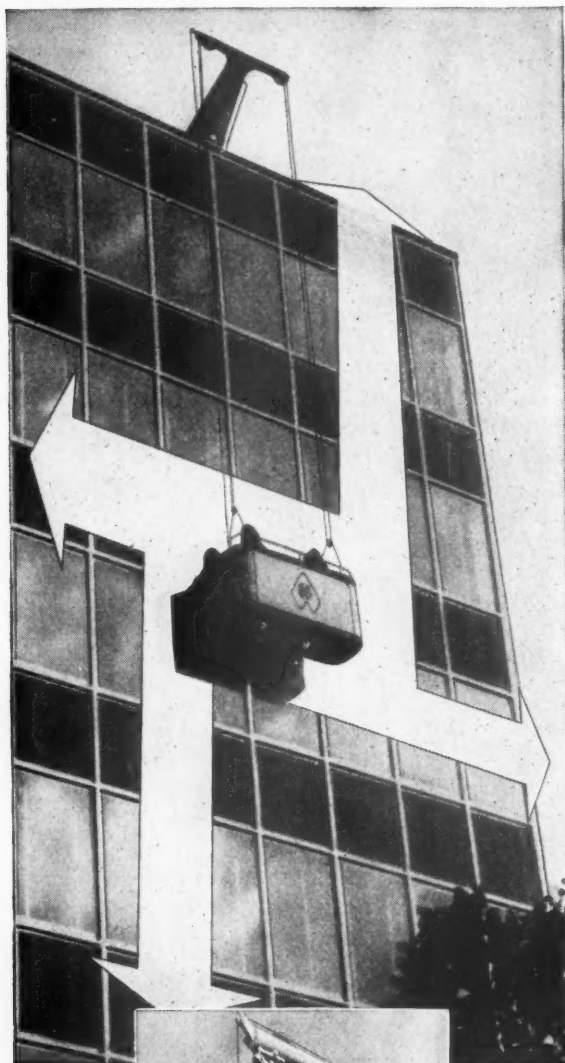


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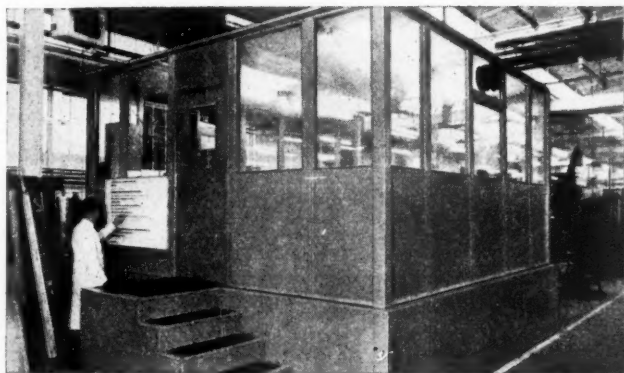
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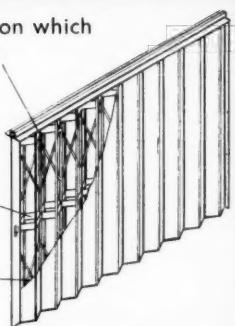
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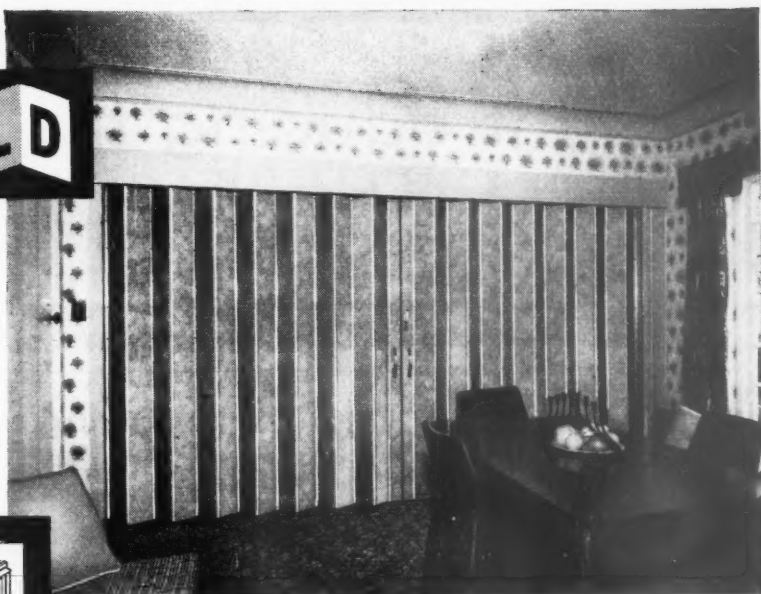
A.A. pickets on which door is built.

16<sup>s</sup> G.M.S. hinge plates.

Leathercloth both sides.

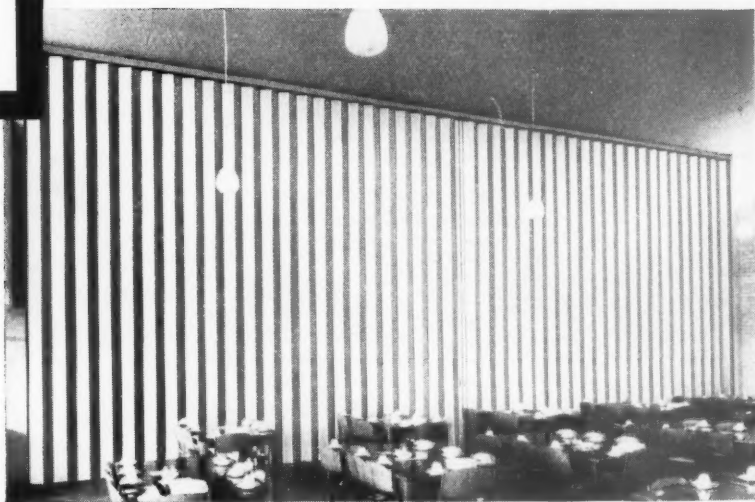


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## Ascot De Luxe G512

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The Ascot De Luxe is fitted with a constant volume gas governor and a water governor. External controls include hot and cold taps and a rotary gas control. Gas and water cocks are an integral part of the heater linings.

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The De Luxe is designed to operate as either a single point heater with a 9" spout, or as a small multipoint heater.

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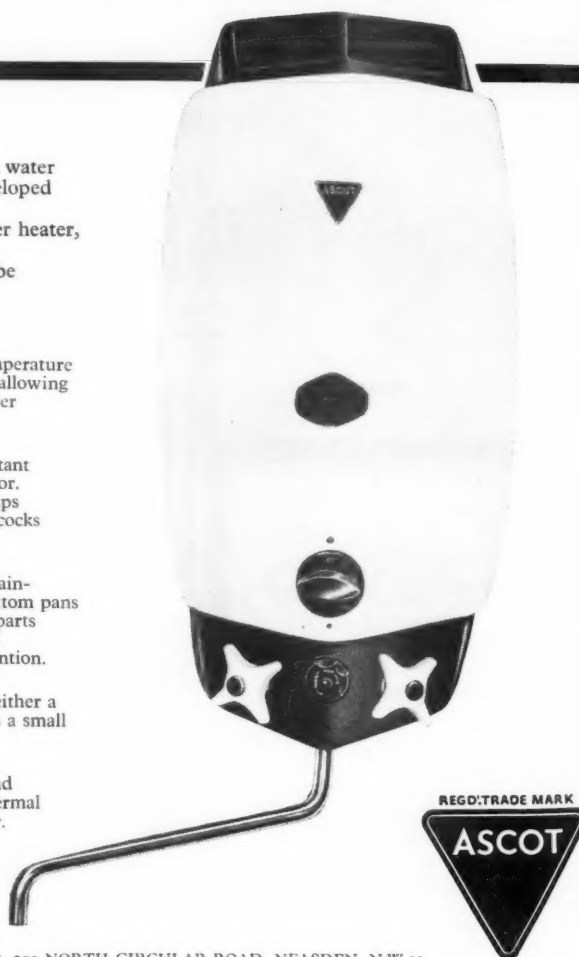
The De Luxe is 23½" high, 10½" wide and 8½" deep and gives 30,000 B.t.u./hr. thermal output from an input of 40,000 B.t.u./hr. producing 0.5 g.p.m. raised 100°F, 0.625 g.p.m. raised 80°F, and pro rata. Pilot consumption is 250 B.t.u./hr.

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# THE JOURNAL OF THE ROYAL INSTITUTE OF BRITISH ARCHITECTS

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APRIL 1960

THIRD SERIES VOL. 67 NUMBER 6 THREE SHILLINGS AND SIXPENCE

## EDITORIAL

### Honours

Mr. Ian Gordon Lindsay, O.B.E., A.R.S.A., F.R.I.A.S. [F], has been elected Academician of the Royal Scottish Academy.

The President of Finland has appointed Mr. J. M. Richards, C.B.E. [4] a Chevalier (First Class) of the Order of the White Rose of Finland. The award is in recognition of his contributions to cultural relations between Finland and Britain.

### New Year Honours List—Addendum

M.B.E. Mr. A. H. Lewis [F], President of the Institute of Northern Rhodesian Architects.

### Sir Giles Gilbert Scott

A Requiem Mass for Sir Giles Gilbert Scott was celebrated at St. James's, Spanish Place, on 16 February. Her Majesty the Queen was represented by Sir James Mann.

A Service of Commemoration and Thanksgiving at which many tributes were paid was held for Sir Giles in Liverpool Cathedral on 22 February.

The JOURNAL is most grateful to Sir Hubert Worthington, R.A., for the appreciation he has written, and to Mr. Richard Gilbert Scott for permission to use the portrait of his father on the cover.

### The Building Centre

Mr. Basil Spence, O.B.E., A.R.A., A.R.S.A., President R.I.B.A., has been elected President of The Building Centre to take the place of the late Sir Giles Gilbert Scott.

### R.A.I.C. Convention

At the 53rd Annual Assembly of the Royal Architectural Institute of Canada in Winnipeg on 4 June, the Prime Minister, Mr. John Diefenbaker is to receive Honorary Fellowship of the R.A.I.C. The principal speaker at the Convention will be the President R.I.B.A.

### Presentation to Mr. Spragg

On 10 March there was a small private ceremony at Canada House at which His Excellency the High Commissioner for Canada presented an inscribed silver rose bowl to Mr. C. D. Spragg, C.B.E. [Hon. A], a gift from the Royal Architectural Institute of Canada: 'For distinguished service to the Architectural Profession, in deep appreciation and cordial respect'.



### The Duke of Edinburgh Opens the 'Creative Craftsman' Exhibition

The Royal Institute was honoured by a visit by H.R.H. the Duke of Edinburgh [Hon. F] when he opened on 17 February the exhibition presented by the Crafts Centre of Great Britain.

The President R.I.B.A., in his introductory remarks, said that it had long been the Royal Institute's custom to make it possible to societies and organisations producing work of a high standard of design to present their work in the R.I.B.A. building.

'We are grateful', he said, 'to His Royal Highness not only for opening this exhibition but for his practical interest in the activities of societies encouraging good design.'

Opening the exhibition, Prince Philip said that the rather dismal story of the decline and the virtual disappearance of the craftsman in the face of the growing juggernaut of mass-produced industry was only too well known to all who were present. The decline had continued as the power of the machine grew, and, finally, there had been signs of a craft revival: it had almost been too late. The continuity had been

interrupted, the tradition lost and the self-confidence of the remaining artist-craftsmen had been undermined.

While we should acknowledge the invaluable and devoted work of the few people who fostered the revival in the early years, it would be foolish not to admit that it had been based on nostalgia and regret and an almost sacred worship of almost anything made by hand. Indeed, the Arts and Crafts Society, founded in the 19th century, from its inception tended to assume that hand-production alone could ensure real quality, whereas, of course, many factories felt that hand-production was out of date.

Prince Philip continued: 'I think today we are beginning to take a more objective view of the situation. There is still a great need to improve the quality—and in quality I include design—of mass-produced goods, on which our standard of living depends. But there are still many things for which there is not a mass demand but which discriminating people realise have a unique quality which only the hand can give. This is important, because just as painters tend to be inhibited by the existence of photography and react accordingly, so in the same way the artist-craftsman tends to be inhibited by mass-produced industry.

'I think the time has come, as this exhibition clearly shows, to realise that the artist-craftsman of today has thrown off these inhibitions.

'Some of the artistic balance which existed in Europe

before industrialisation turned everything upside down has been regained. This means that craftsmen need no longer feel self-conscious about their work. They are recognised, valued and important members of our modern culture. It means that they can set about their work with all the self-confidence and pleasure of their predecessors, who gave so much to our heritage.

'There is even more to it than that. The problem of the members of an overcrowded society with its mass living, its mass-production, its mass employment and its mass travel, is to retain any kind of individuality. This is where the craftsman can help.

'He produces individual things for individuals to own, and to possess something unique helps to make the owner unique. This applies equally well to groups of people and to communities.'

The Duke added that the Crafts Centre always welcomed inquiries, and that he believed architects on the whole could do more to employ craftsmen. 'But no architect', he said, 'could have done more than Basil Spence, who is so very well aware of the value of good craftsmanship.'

The Hon. Chairman of the Crafts Centre, Mr. John Farleigh, thanked the Duke of Edinburgh, who then inspected the exhibits.

Some 7,000 people saw the exhibition, which closed on 9 March.



The President R.I.B.A. introducing to Prince Philip The Hon. Lionel Brett, Mr. Hubert Bennett, Mr. Gordon Ricketts and Mr. Richard Sheppard

On the facing page: the Metal and Stone Section of the 'Creative Craftsman' exhibition



### Council Business

The Council met on 8 March with the President, Mr. Basil Spence, in the chair.

**Public Opinion Survey on Attitude to Architects.** The Secretary reported that the proposal made in Council that a pilot survey of the attitude of the public towards architects should be undertaken at a cost of £200 had been considered by the Finance and House Committee in consultation with the Public Relations Committee, and that the latter did not see their way to pay this sum out of the existing Public Relations Grant. The Finance and House Committee therefore agreed to the cost being met from ordinary revenue.

**Sir Charles Barry Collection of Drawings.** The Secretary also reported that Lord Mottistone [F] had kindly presented to the Sir Banister Fletcher Library an interesting volume of drawings by Sir Charles Barry, which complement in many respects those already held by the Library. The volume belonged to a brother of Elizabeth Barrett Browning, Octavius Barrett, who was apparently an assistant in Barry's office. This is the centenary year of Barry's death and the Library Committee are hoping to arrange an exhibition of his drawings at the R.I.B.A. in the summer.

**Comparison of Professional Incomes.** The Council considered a paper from the Economic Research Department on the Report of the Royal Commission on Doctors' and Dentists' Incomes and approved publication (see page 195).

**Appointment of Deputy Librarian.** The Council authorised the Library Committee to recruit a Deputy Librarian at a salary scale of £1,100-£1,800. The Library has not

increased its staff during the last twelve years, although most of its activities have been extended and the international reputation of the Institute collections has steadily increased, resulting in wider contacts with scholars from abroad.

**Reconstitution of the Board of Architectural Education.** The Council agreed that the existing Board should become the Advisory Council on Architectural Education, following a recommendation of the Committee on the Oxford Architectural Education Conference. More details of these changes are given at page 214.

**R.I.B.A. Technical Information Service.** In June 1959 the Council approved the setting up of a Technical Information Service, subject to approval by the Finance Committee. The Council has now approved a recommendation from the Finance and House Committee:

1. That from the Development Fund £2,000 be allocated to the Technical Information Service in 1960, £3,000 in 1961 and £3,000 in 1962.
2. That the Technical Information Committee be authorised accordingly to recruit a Technical Editor at £1,250-£2,000 to initiate the Service.

This post has now been advertised; applications on forms available from the Secretary should be made by Friday 29 April 1960.

**I.U.A. Congress 1961.** The Council of The Building Centre have voted the sum of £1,000 to be at the disposal of their Technical Committee for the purposes of arranging functions and an exhibition for the I.U.A. Congress, 1961.

**R.I.B.A. Finances in Relation to Mortgage on Building.** The Council approved the following proposal from the Finance and House Committee.

In December 1958 the Council decided that all surpluses of income over expenditure of Ordinary Funds in the years 1958-61 should be put to a 'Development Fund'.

In November 1959 it was decided that this fund should be held as to 80 per cent in short-term (readily realisable) investments and 20 per cent in equities representing a reserve fund.

The object of the fund was to provide a reserve against unforeseeable expenditure and to finance projects for the advancement of members' interests which would involve a 'once-for-all' expenditure. Obviously any project which would involve recurrent annual expenditure would have to be dealt with through the annual estimates of ordinary expenditure.

The surplus in 1958 amounted to £11,759 and in 1959 to £18,775, from which must be deducted £2,000 advanced to the U.K. Committee, I.U.A., on loan to finance preparatory work for the 1961 Congress and £2,000 to capitalise the new Technical Information Service. The net total of the fund is therefore now £26,534.

This total must, however, be viewed against the background of the debt of £70,000 secured by a mortgage on the R.I.B.A. building.

This mortgage is being repaid at the rate of £3,500 per year out of current ordinary income; and interest on the outstanding balance is paid at  $5\frac{1}{2}$  per cent at present, though the mortgage deed provides an escalator to  $6\frac{1}{2}$  per cent if the bank rate rises sufficiently.

The Committee have had consultations with the Institute's stockbrokers, bankers and accountants, and it is clear that it is impossible to *obtain*  $5\frac{1}{2}$  per cent for any money *lent* by the Institute on any short-term basis. Investment in equities would produce an even lower rate of interest at present though there would be growth prospects over a very long term.

The basic position is therefore that the accrued Development Fund of £26,534 is really no more than a portion of the borrowed £70,000 which has not been utilised for capital expenditure. Moreover, on this £26,534 the Institute is receiving about  $4\frac{3}{4}$  per cent and paying out  $5\frac{1}{2}$  per cent interest, a net loss of about  $\frac{3}{4}$  per cent or £200 per annum as long as the fund is held unemployed.

On the above facts the Institute's advisers point out that the best investment for the Institute's surplus funds must be in its own building, i.e. by accelerating repayment of the mortgage.

The Finance and House Committee anticipate a further surplus in 1960 of £10,230 and have no knowledge of any project which may cost more than that amount.

The Council are accordingly recommended to pay off an additional £21,000 of the mortgage on 17 June, 1960. (Three months' notice of such repayment is needed.)

If this is done the outstanding debt will be reduced from £64,750 to £42,875; the date of discharge will have been brought forward from 1978 to 1972 and the interest payable in 1961 and subsequent years will be reduced by not less than £1,155 per annum.

The Institute will still be free to finance any special project either by borrowing internally from subscriptions paid at the beginning of the year (i.e. anticipating the year's surplus) or by borrowing again against the security of the mortgage.

#### A.R.C.U.K. Statement

It was reported to the last meeting of the Architects' Registration Council that a property development company had recently been writing to a large number of architects inquiring whether they would be willing to work for the company, or for a client the company might introduce, on either of the following terms, at the choice of the architect:

(a)  $4\frac{1}{2}$  per cent of the full A.R.I.B.A. [sic] Scale and their conditions of payment and employment;

(b) A net 6 per cent of the contract price *if and when a building is erected*. [Editor's italics.] Payment of your fees would be deferred and would be payable on the issue of certificates at a net rate of 6 per cent on the contract price, and this would be the limit of our liability on any job. It must be clearly understood that in the event of a scheme not being proceeded with, or being abandoned and becoming abortive, or of the site being sold at any stage, then you would not be entitled to any fee at all, and this is a risk you must take. Further, you may rest assured that we are Developers and Investors and not Property Dealers and we do not intend to sell any of these sites unless unforeseen circumstances arise, but should that unlikely event arise, then we would use our utmost efforts to persuade the new Owners that you be retained and we would undertake not to reveal our terms of engagement with you, but it must be clearly understood that there will be no obligation on us for any fees if we fail to do so. On the other hand you will only be fully instructed if we intend to complete the development.

The Council unanimously resolved that as the acceptance by an architect of either of the terms offered by the company would be in breach of professional ethics, it unhesitatingly advised all architects receiving such an offer to reject it categorically.

#### U.S.S.R. Study Tour

The Town and Country Planning Association is arranging a special study tour in the Soviet Union for members and their friends interested in town and country planning, town development, building and architecture.

The tour will last for 14 days (10-24 June 1960), and will include Moscow, Leningrad and Kiev.

The basic tour fee is £149, with a special reduction of £10 for individual members of the association.

Further details are now available from the Tour Secretary, T.C.P.A., 28 King Street, W.C.2.

#### R.I.B.A. Diary

TUESDAY 5 APRIL, 6 p.m. General Meeting. Presentation of Royal Gold Medal to Professor P. L. Nervi.

TUESDAY 5 APRIL to TUESDAY 12 APRIL, Monday to Friday 10 a.m. to 7 p.m., Saturday 10 a.m. to 5 p.m. Exhibition of Professor P. L. Nervi's work. (Excepting 6 April.)

MONDAY 11 APRIL, 6 p.m. Library Group. Mr. David Cole [4] will introduce an evening on the Gilbert Scott collection of drawings.

THURSDAY 14 APRIL, 12.30 p.m. to TUESDAY 19 APRIL inclusive. R.I.B.A. offices and library closed for Easter holiday.

THURSDAY 14 APRIL to TUESDAY 19 APRIL inclusive. R.I.B.A. luncheon room closed for Easter holiday.

TUESDAY 3 MAY, 6 p.m. Annual General Meeting.



# Sir Giles Gilbert Scott, O.M., R.A.

An appreciation by Sir Hubert Worthington, R.A. [F]

BY THE DEATH of Sir Giles Gilbert Scott we have lost our greatest architect of achievement, and a man of outstanding and lovable character.

At the age of twenty-two, he flashed like a meteor into the architectural firmament.

With his hereditary background, it might have been said that his career was due to family influence but, though genius was in the blood, he reached his great position by his own unaided effort, through a competition that thrilled the world.

He was, indeed, the apostle of youth, and throughout his life he retained a childlike buoyancy and an innate modesty.

He was an artist, and saw everything from that point of view. If he felt that the idea was right, nothing stopped him. He believed in personal work, running his great commissions with a staff that, for these days, seems diminutive. Yet he took infinite pains with every detail. The big American architects, when he went there, were staggered by all this: 'What, I've 400 assistants in my office, and you run yours with a staff of eight—it's not possible!'

He had no time for architectural politics, aesthetic theories, or chatter about styles. Everything had to give way to creative work.

It was his view that to employ an architect was an act of faith, and that once the problem was set, there should be no interference with matters of design.

So he avoided publicity, never argued with committees, never got rattled, never got on his hind legs, or his high horse, but let the storm peter out, and then proceeded with unflinching concentration. When hard work demanded a 'let-up' he found it in golf, which never failed to restore him.

A serene temperament, and a happy family life, for he was devoted to his wife, who died eleven years ago, and to his sons Maurice and Richard, kept him young.

Richard, with Mr. F. G. Thomas [F] in partnership, carries on the work in the fourth generation.

As long ago as 1920 Sir Giles became a member of the F.A.B.S., the venerable, small and friendly dining club, where he joined with zest in frank discussion of architectural problems with his fellows, and under such circumstances he was an admirable talker.

One must consider his architectural background. 'Grandfather', he used to say, 'was the successful practical man, and a phenomenal scholar in Gothic precedent, but Father was the artist.'

Old George Gilbert conjures up a tremendous personality in the architectural world. He lived from 1811 to 1878, was Royal Gold Medallist in 1859, and President of the R.I.B.A. in 1873-76. Lytton Strachey, in his *Queen Victoria*, sums him

up in a pungent, naughty and most amusing way. Gwilt has an entertaining entry:

'He restored portions of every Cathedral in England and some in Wales!'

My father told me how Sir George drove into the close at Salisbury in his fine coach and four, with large drawings strapped on to the back, and the horn blowing to announce his arrival, whilst the Dean and Chapter received the great man with obsequious ceremony.

George Gilbert Scott, the son, worked in a different way. His high reputation rested on the churches of St. Agnes, Kennington, and All Hallows, Southwark, both of which, sad to say, were destroyed in the war. They contained what was best in the Gothic revival. He was converted to Catholicism by Cardinal Newman. The four children, Sebastian, an eminent radiologist, Giles, Adrian and Dorothy were born at 26 Church Row, Hampstead.

His father died in 1897, when Giles was only seventeen. Giles and Adrian were both articled to Temple Moore [F], who had been a pupil of their father's, and the office was in the half-timbered building in Staple Inn, in the days when there was only candlelight. The mother played an important part in their lives, and used to take the boys cycling round the old churches of Sussex, and Giles used to say that this was where he learned his Gothic architecture.

Then, whilst still articled, he decided to go in for the Liverpool Cathedral competition. Working through the night, for he had to carry on at the office by day, his mother helped him to line in the masonry joints, and though tempted to throw up the scheme in the middle, he sent it in.

When the envelopes were opened, he received a disconcerting letter from the committee:

'You have been placed first by the assessors, but before entrusting you with the work we should like you to answer three questions: (1) your age; (2) your religion; (3) your list of executed work.'

To which he replied:

'Age: 22; religion: Roman Catholic; list of executed works: a pipe-rack in fretwork, designed by myself and executed by my sister.'

The committee had the faith to give him the job, but put the elderly Bodley, who had been one of the assessors, to partner him. It was an uneasy and irreconcilable compromise, and after three or four years Giles wrote a letter of resignation, which was not sent, for, providentially, Bodley, in the fullness of years, died in 1907.

An admirable committee allowed the young architect to make a fresh start. In all he worked for fifty-eight years on the one job. This was, indeed, a test of creative designing, and he grew all the time in sureness of touch.

The plan is dynamic. Though the

competition design had twin towers, he gradually evolved the great crossing, with its central tower, buttressed by the four transepts, and balanced by choir and nave. The finished tower is superb, and its construction faultless, and he played skilfully with subtle batters that make it so alive. It dominates the whole mass, and is visible all over Merseyside and to ships coming in from the Atlantic.

When I once spoke to him about the immensity of the job and the courage needed to tackle his great vaults, he said, 'I've never been either impressed or oppressed by the size of the job'. Surely this is evidence of the greatness of the man. It is sad that he has not lived to see the consummation that he longed for. He said in the thirties, 'If there are no more wars, and the money comes in, I should see it through'. All that remains to be done are the last bays of the nave, and the great West Front, and he has detailed everything.

He was lucky in his Dean, for Dean Dwelly, who died a few years ago, was a man full of vital energy and vision, who, like the committee, backed up the architect by every means, and by his genius for showmanship and ritual, made the place alive. It was a happy and stimulating relationship.

A few years ago, when the two were dining well in London, they vied with each other in putting forward enthusiastic ideas for the completion of the nave. Next day the architect had to go to Exeter, and in retrospect he felt compelled to telegraph to the Dean: 'Cancel all promises made last night!'

Many will remember the beautiful service in the Cathedral for the R.I.B.A. Conference in 1948.

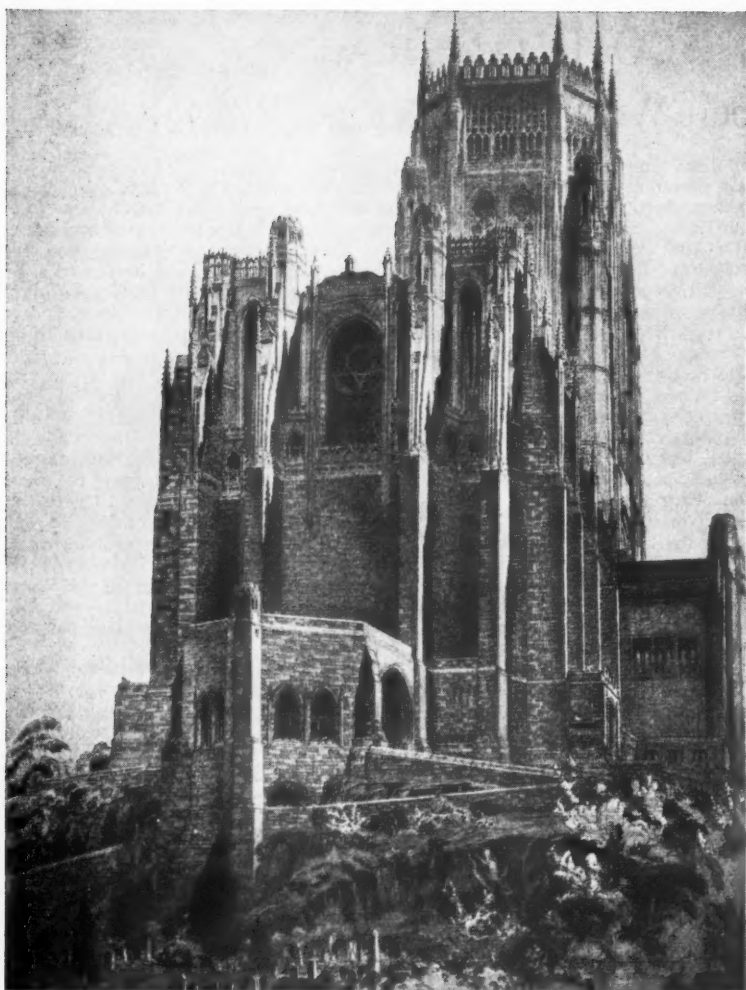
He was first and foremost a church architect. Liverpool Cathedral, the nave of Downside Abbey, the Church of Ampleforth Abbey, now on its way to completion, the Chapel of Trinity College, Toronto, a recently finished and unpublished work that gave him great pleasure, are but a few of his ecclesiastical buildings.

He never repeated himself, and played with effects of light and composition and use of materials.

The little church of St. Maughold, Ramsay, in the Isle of Man, the Church of Our Lady at Northfleet, with a tower that helped the solution of the greatest of his many towers, Liverpool Cathedral, St. Paul's, Derby Lane, Liverpool, with its three transepts and its grey bricks go to prove his unflinching creative impulse.

St. Francis Terriers, of flint, has its lighting from the aisles and crossing and has no clerestory; St. Andrew, Luton, of brick, has clerestory lighting and none from the aisles. St. Alban, Golders Green, has a massive battered tower over the crossing,





Liverpool Cathedral West Front. From a drawing by A. C. Webb

and he particularly liked St. Michael, Ashford, Middlesex.

How admirably he embodied the special characteristics of what is the outward and visible symbol of the corporate life of 600 public schoolboys in the Charterhouse Chapel! The great expanses of wall are of Bargate stone, the dressings of Weldon and Clipsham. The building is lighted by tall lancet windows, set in five buttress features on either side, and scale is given by the low aisles and porches and vestry.

But he was far more than a church architect. The new buildings at Clare College, Cambridge, with the central memorial arch leading to the quadrangle, the long, low lines, with pleasant grey bricks and Portland stone and Italian tiles, are an admirable example of collegiate building.

His huge brick University Library, built on the same axis, with its massive tower dominating the wide spread of open access bookstacks and reading rooms, rather dwarfs the intimate charm of Clare.

Then by way of contrast he was called upon to build the Bodleian Library Extension at Oxford. Like his work at Magdalen College and St. Anne's it is of stone. The problem was a difficult one, and it is not one of his most successful buildings. Here the bookstacks are capable of taking five million books. It is not, as at Cambridge, for open access, but the books are quickly delivered to the Old Bodleian Library reading rooms by a long tunnel and conveyor under the Broad. A careful study of library technique was made by him in America.

Additions to Lady Margaret Hall, and Whitelands College, Putney, both have charming little brick chapels, and another building of a collegiate nature is the William Booth Memorial at Denmark Hill, a large training college for cadets of the Salvation Army. There the composition is dominated by a noble tower, 200 feet high. The whole is a good study in fine brickwork with Italian tile roofs and tall interesting staircase features to the hostels.

It is a pity that he built so few houses for his own home, Chester House, Clarendon Place, has unusual charm and distinction. It is planned as a group of self-contained units, and is a comfortable house, and a good background for the life of a busy man.

Finally we come to features in the London scene. The rebuilt Guildhall, so important a setting for great national occasions, as fresh and alive as its Victorian predecessor was dull and ordinary, was built between two Lord Mayor's Banquets.

The new House of Commons, in which his brother Adrian was associated with him, was a problem of great complexity, and a major achievement. The clean lines of Waterloo Bridge, after a stormy passage, mark him on the Thames, and his great road bridge over the Firth of Forth is now under construction.

Sir Giles had a considerable influence in the industrial field, and he found this work a refreshing change. Battersea Power Station is a familiar London landmark, and, when it is completed, Bankside, after all the controversies, will make a magnificent frontage to the Thames, and the final work is now proceeding. The Guinness Brewery at Park Royal is another large scheme of a similar nature.

In considering his output, there is no need to dwell on the loss of Coventry Cathedral, a disappointment that left no bitterness, for he was always magnanimous.

So he went from Cathedral to telephone kiosk, from altar ornaments to University Library, from the tomb of Cardinal Gasquet at Downside Abbey, which he considered one of his best works, to the Guildhall.

Here is a bare outline of his great contribution to the life of his times, work recognised in a most signal manner. He and Lutyens are the only architects who ever received that most coveted distinction, the Order of Merit. He was an Hon. D.C.L. of Oxford, and an Hon. LL.D. of Liverpool. He was knighted thirty-six years ago, and was made an R.A. in 1922. He won the Royal Gold Medal in 1925, and was President of the R.I.B.A. from 1933-35, covering its Centenary Year.

But in spite of success that came to him in full flood whilst still a young man, he never lost his boyish modesty or zest for work. He bore his last illness with courage, and was detailing a church for Plymouth from his hospital bed almost to the end. He was not, as he has been described, a retiring man, and innumerable contacts with the great added to his own intrinsic greatness. In sixty years of dedicated strenuous work, he followed the light that was in him, unmoved by passing fashions and ephemeral criticism.

His was a singularly beautiful character, free of the jealousies that so often spoil the successful artist. He bore life's triumphs and life's trials with an unruffled serenity. Time will prove the enduring value of his contribution to English architecture, and his many friends mourn his loss.

He was laid to rest 'within the sound of the masons' hammers', at a point that will be by the West Front of his great Cathedral.

# Comparison of Professional Incomes

This paper from the Secretariat was considered by the Council at their meeting on 8 March 1960, and they decided on a number of lines of action which are set out at the end of the paper (para. 41).

WHY HAS SOCIETY placed such a relatively low value on the services of the architect? The disclosure of the architect at the bottom of the scale of professional earnings, published in the Report of the Royal Commission on Doctors' and Dentists' Remuneration,<sup>1</sup> brings into sharp focus the fundamental questions that have been concerning the profession and the Institute in recent years. This paper analyses the findings of the Commission as they affect the architectural profession. In some cases they provide confirmation of existing beliefs (e.g. that the scale of fees gives a lower income to architects than to engineers and surveyors); in others they suggest new lines of investigation. In all cases they should act as a spur to the work of the many Committees of the Institute whose work they affect.

2. The most helpful single figure that summarises the relative positions of the professions is that of career earnings, set out below. This may be said to represent roughly what a man in each profession who was 30 in 1955 might then reasonably have expected to earn if he worked on a full-time basis until the age of 65, provided all the circumstances of 1955 remained unchanged.

## Total 'career' earnings: Age 30 to 65

	£'000
Architects .. .. .	54
Engineers .. .. .	59
Surveyors .. .. .	63
University teachers .. .. .	63
Solicitors (Scotland) .. .. .	67
Accountants .. .. .	71
Advocates .. .. .	72
General medical practitioners .. .. .	79
Graduates in industry .. .. .	84
Solicitors (England and Wales) .. .. .	88
Barristers .. .. .	92
Actuaries .. .. .	105

3. Architects not only showed the lowest figure for total career earnings: at almost every age average earnings of architects were lower than those of other professions. Figure 1 illustrates the median income of the professions in each age group (see also the corresponding figures in Table 1). The median represents the 'middle' income, with half of all the members in the group earning more and half earning less. The median is the best measure to use for these

comparisons since, unlike the average, it is not pulled up by a few very high incomes. The income figure used is the net earned income in the financial year 1955-56 after the deduction of all expenses accepted by the Inspector of Taxes, but before any deduction of capital, personal or other allowances or of tax.

4. As Figure 1 shows, only barristers in the 30-34 age group had a median income below that of architects; for those barristers who remain in the profession, however, incomes rise rapidly thereafter.

5. The Royal Commission also inquired into professional earnings in other countries. The data on the subject were limited, but it appeared that the value placed on the architectural profession was well below that of doctors, dentists and lawyers; although accountants and engineers fared worse in some countries. In the U.S.A. architects earned more than engineers. In Canada, architects and engineers together earned more than accountants (but if a recent article in the *Daily Express* is to be believed, an architect in Canada can expect to receive the same wage as a plasterer). Australia (Victoria) appears to put a slightly higher value on architects, placing them above engineers, chemists and accountants. In Belgium, architects' earnings are slightly higher than accountants', but less than other professions'.

## Reliability of the surveys

6. The income surveys in this country were carried out by the Government Social Survey on behalf of the Royal Commission, and there is no reason to question the reliability of the results for the purpose of broad comparison of levels of professional earnings in the period covered by the surveys. A random and representative sample was chosen for each group. In the case of architects, this was a one in five sample of R.I.B.A. corporate members in the United Kingdom in March 1958. The response rates for each profession varied from 92 per cent (actuaries) to 60 per cent (solicitors), with architects at about the average of 75 per cent. The architects were, incidentally, among the quickest in sending in their returns.

7. The results were checked back with each profession for reliability. The resulting figures for the age distribution of architects corresponded very closely with those obtained through the R.I.B.A.'s membership survey of 1957. The only significant difference was that the latter showed a higher proportion of members over 65. This could be attributed to the fact that the sample for the Royal Commission sur-

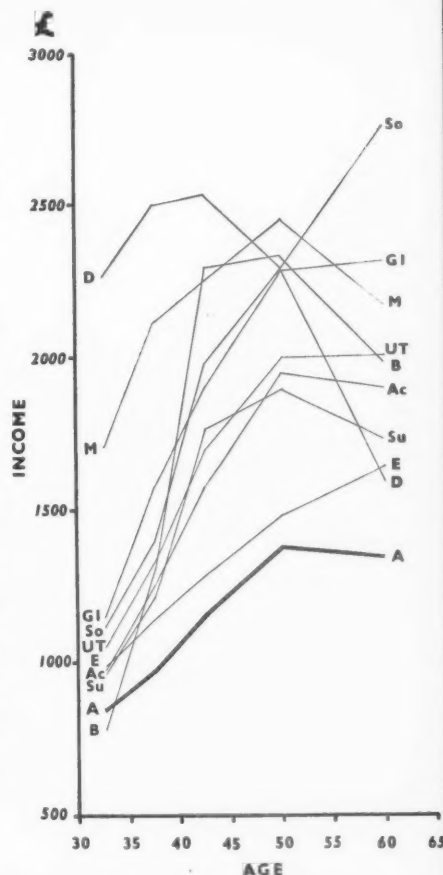


Fig. 1. Median Incomes

vey was selected on the basis of membership in March 1958 whereas the income figures required were those for 1955-56. Members who had died between 1955 and 1958 were therefore excluded from the Royal Commission results, and these were most likely to have been over 65. The results for architects can therefore be used with reasonable confidence to give a guide to the relativities of different groups within the profession.

8. The information obtained through these surveys related to income in 1955-56, so that the results are now out of date. The Royal Commission obtained information from each profession about any subsequent changes in the general level of earnings to guide them in recommending what should

<sup>1</sup> Published by H.M. Stationery Office, February 1960, Cmd. 939, price 15s.

be the levels of doctors' and dentists' remuneration. The relativities between the other professions may now have changed. But although architects' salaries have risen since 1956, there has been no change in the scale of fees, and the relative position of the architect is not likely to have changed.

#### Factors that influence relativities

9. The Royal Commission listed a number of factors such as length and cost of training, nature of the work and responsibility which, taken together, established broadly a relationship of net advantage or disadvantage for any one profession in relation to others. Their report is, however, disappointing in its lack of any detailed description of how they reached their conclusions about what should be the levels of doctors' and dentists' earnings in relation to those of other professions, or any discussion of the underlying principles that might govern the place of a profession in society. All we have to guide us is the comment that

'the relationship between earnings in different professions is determined not only by considerations of precise justice and logic, but also by tradition and economic pressures of various kinds'.

10. Two important factors which influence the level of relative earnings in each profession are (a) the age distribution—a relatively high proportion of young members may tend to bring down the level of average incomes—and (b) the proportion of members working in different fields of occupation—private practice, industry, public service etc., each of which might at any one time have different levels of earnings. For R.I.B.A. members, the proportions shown by the Royal Commission survey for 1955–56 were as follows:

	per cent
<b>Private practice</b>	
Principals .. .. .	25
Assistants .. .. .	21
	— 46
<b>Public service</b>	
Central government ..	8
National boards .. .	5
Local government .. .	31
	— 44
<b>Teaching</b> .. .. .	1
<b>Commercial/industrial</b>	
firms and other architectural employment ..	7
Other employment ..	2
	— 100

#### Age distribution

11. A large proportion of architects are in the younger age groups—35 per cent were under 35 in 1955–56—as a result of an intake during the post-war years greatly in excess of the number of deaths and retirements. However, this position is not unique. More than half of the group 'Graduates in industry' who are among the higher income groups were under 35 in 1955–56. The corresponding proportions

for barristers was 38 per cent, surveyors (excluding those in public service) 37 per cent, engineers 29 per cent.

12. At the other extreme were the actuaries, with a high proportion of members over 45. This profession was at the top of the income scale, but it is a very small and highly specialised one, with very high standards of entry, and is undoubtedly finding it difficult to recruit enough new members.

#### Comparison by occupation group

##### (a) Principals in private practice

13. The proportion among the professions working as principals in private practice runs from virtually 100 per cent for barristers, 62 per cent for solicitors, 33 per cent for accountants, 25 per cent for architects, to less than 2 per cent for engineers. Architects in this group still earned on the whole less than other professions; although accountants did very little better; and barristers were relatively worse off except for the top 25 per cent (see Table 1). For the top 10 per cent of incomes architects fared better than accountants and general practitioners (both medical and dental).

14. The report draws attention to the fact that in many professions high incomes in fee-earning private practice are to some extent offset by the risks run of financial decline or even failure, and by the heavy capital investment which practitioners have to provide for the purchase of premises, equipment, working capital and frequently goodwill. As is shown in Table 1, the average capital outlay of an architect principal was £1,995, less than that for other professions both in amount and in relation to the median income. The amounts paid by individual architects varied widely; one-fifth paid nothing; one-tenth paid £6,000 or more.

15. The chances of an architect earning an income of £10,000 or more (and for architects this would be likely to happen only in private practice) were 4 in 1,000, the same as for engineers, accountants, surveyors and medical consultants, but less than graduates in industry (6 in 1,000), barristers (14 in 1,000) and actuaries (20 in 1,000).

16. Adam Smith suggested that 'in a profession where 20 fail for one that succeeds, that one ought to gain all that should have been gained by the unsuccessful 20'. While so great a disparity may not be acceptable today, the Royal Commission's comment in recommending a dif-

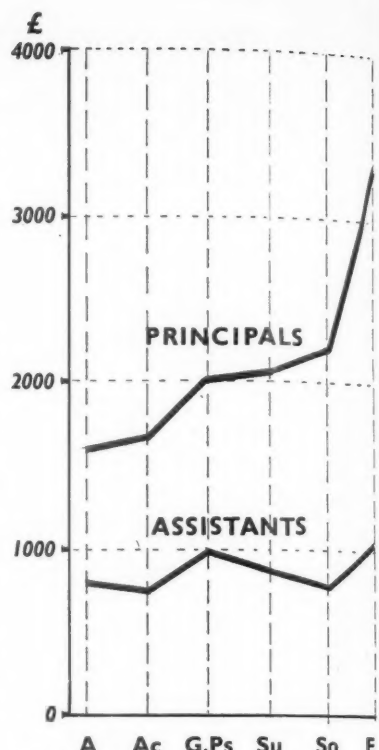


Fig. 2. Median incomes in private practice

ferential payments scheme for G.P.s (paragraph 346 of their report) is interesting in this context:

'We do not believe that constant striving for increased income is or should be the main incentive to good general practice, but at the same time we think it must be discouraging both to existing doctors and to potential recruits if a really first-rate practitioner has so little prospect of earning more than one who is merely satisfactory. A few higher earners in any profession are apt to make an impression out of all proportion to their numbers, and rightly or wrongly to raise the esteem in which many hold their profession. We think it desirable that general medical practice should, even if only to a limited extent, share this advantage with other professions.'

17. By comparison with engineers and surveyors, the two other professions which are in part concerned in building, architects in private practice fared badly at all levels. The following figures may be useful in connection with the review of the R.I.B.A. Scale of Fees:

Principals in private practice		Median income	25 per cent earned more than	10 per cent earned more than
		£	£	£
Chartered Architects .. .. .		1,621	2,406	4,053
Chartered Surveyors .. .. .		2,041	3,168	5,432
Engineers .. .. .		3,368	6,712	12,082
(Chartered Civils, Mechanicals and Electricals)				

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### (b) Assistants in private practice

18. Salaried employees of professional firms came in the lowest income group for almost every profession (for engineers, those working in local authorities earned less; corresponding figures for other professions in local authorities are not available separately to show whether the same is true for them). Assistant architects fared on the whole better than solicitors and accountants, but slightly worse than surveyors and doctors; engineers and dental assistants did substantially better (see Table 1 on page 199).

19. Doctors and dentists had a very small number of qualified assistants working for them—about one for every ten. In these professions the assistant generally occupies that position for a short time only on his way to becoming a principal. The Royal Commission decided for this reason not to recommend a standard or minimum rate for them, leaving their payments and conditions of service to be governed by the individual contract made with their principal. They suggested, however, that the State could influence the rate indirectly in two ways: (a) by setting an example in the salaries paid to registrars and trainee assistants (paid by the Government) and thus influencing the market, and (b) in settling the distribution of the remuneration paid to G.P.s, to avoid making it impracticable for a G.P. to pay his assistant a reasonable salary.

20. Of the remaining professions engaged in private practice, solicitors had the lowest ratio of qualified assistants to principals and engineers the highest:

21. The staffing of private architectural offices appears to have been changing since the war. In 1949 there were only three qualified assistants to every ten principals in private practice; by 1958 the ratio was 9 : 10. Despite this increase, there is an acute shortage of assistants today (the R.I.B.A. Appointments Department had 375 vacancies on their books in February 1960). But the demand is mainly for junior assistants (Inter/Final standard with office experience is usually the first request) and the median salary offered comes between £800 and £900. The fully qualified 'design' assistant, who is frequently second preference, can command a salary of over £1,000, an increase of 25–30 per cent over 1956. A shortage in supply, resulting from a fairly sudden increase in the volume of work coming to architects, is thus giving salaries a much-needed boost.

22. It seems clear that for architects private practice has moved away from the position in which the qualified assistant works for a period merely as a stepping-stone to becoming a partner or principal, to one in which many architects find themselves working as assistants in private practice, at low salaries, for the whole of their working life. There has thus been a dilution of the profession since the war, related in part to the large numbers coming in during the early post-war years.

23. What steps are needed to improve the position both for principals and assistants? First, an early decision on the vexed question of the 'technical assistant', now being considered by the Committee on the Training of Technicians and Technologists.

extent non-professional technical and/or administrative assistance, office mechanisation, improved methods of working, standardisation, provision of central information services and so on, might help the architect to carry out his work more efficiently and at reduced cost. The Management Committee and the Technical Information Committee are tackling some of these problems, while the Professional Relations Committee are concerned with the status and responsibilities of the architect at various levels of work.

24. On the one hand we need to reduce the architect's out-goings; on the other, to secure for him a more fair reward in relation to the volume and complexity of work handled. This indicates the need not for hasty reaction, but for a fundamental and long-term review of the Scale of Fees. Before this can take place, a detailed survey of the costs of a number of the more efficient architects' offices must be made, since it will be necessary to provide conclusive evidence that the existing scale gives inadequate rewards even to very efficient architects. At the same time, an attempt should be made to devise a scale of fees that would give positive encouragement to higher standards of performance and to reduced building costs. This will not be easy.

### (c) Other salaried employment

25. Perhaps the most marked gap in earnings between architects and other professions occurred in the group working in salaried employment outside private practice, i.e. in central and local government, commerce and industry, and teaching. (See below.)

26. This group covers a wide range of occupations, in which different levels of earnings occur, so that the average for the group as a whole can be influenced by the proportion working in particular occupations. Those working mainly in industry and commerce tend to have relatively high incomes, particularly at the top. This is also noticeable for professions which have a significant proportion of members working in a non-professional capacity (e.g. the accountant as company director). Where, on the other hand, there is a high propor-

	Ratio of qualified assistants to principals	Median income of assistant
Solicitors .. .. .	3 : 10	£ 762
Accountants .. .. .	6 : 10	773
Architects .. .. .	8 : 10	802
Surveyors .. .. .	9 : 10	885
Engineers .. .. .	30 : 10	1,050

*Prima facie* there appears to be a relationship between these two sets of figures—as the ratio of assistants to principals rises, so the median salary increases—which might suggest that an increase in the number of assistant architects in relation to principals is a good thing. But such a conclusion would be dangerous without knowing more about the circumstances of each type of practice. The solicitor, for example, has his managing clerk, a trained assistant with a non-professional status of his own; the professionally qualified assistant is usually employed, like the doctor, for a short time only prior to becoming a principal. Private practice takes in only a small proportion of engineers, and their practices are mainly large firms where a high ratio of assistants to principals would be expected. Also, they can obviously afford to pay their assistants well.

Before the profession is likely to come to any agreement on this point, it seems necessary to know much more about the structure of the architect's office—to what

Salaried employment outside private practice	Median incomes	Ten per cent earned more than
	£	£
Architects .. .. .	941	1,609
Engineers .. .. .	1,186	2,200
Graduates in industry .. .. .	1,260	2,840
Solicitors (Scotland) .. .. .	1,300	2,050
University teachers .. .. .	1,380	2,467
Accountants .. .. .	1,442	3,011
Solicitors (England and Wales) .. .. .	1,570	2,750
Actuaries .. .. .	1,940	5,438

Further details are given in Table 2, page 199.

tion working in local government (architects, for example—see paragraph 10) then this pulls down the average.

27. The engineering profession, for which income figures are available for a number of separate occupations, illustrates the variation to be found: the large number

a more extensive survey of salaries and responsibilities. Comparison with other professions, and the relative proportions of qualified staff which they have in different local authority grades, might be illuminating, and this is something the new Association of Official Architects may want to pursue.

	Number in sample	Median income
		£
<i>Engineers in salaried employment outside private practice</i> .. .. .	5,157	1,186
Local authority (except teachers) and public utility .. .. .	606	968
Commerce and private industry .. .. .	2,533	1,181
Civil service .. .. .	754	1,265
Salaried employment but not as engineers	237	1,620

working in industry show their influence on the median income for the group.

28. Similar figures for architects are unfortunately not yet available (although we have been battling with the Royal Commission and Social Survey since August 1959 to secure them). However, we hope soon to have further details for architects which will relate age and income in the main fields of central and local government, national boards, teaching, and other salaried employment, as well as principals and assistants in private practice. From this it will be possible to make a fuller analysis of the relative incomes of architects of comparable age working in these fields, and to see to what extent architects in local government fare worse than their colleagues elsewhere.

29. One associated point to consider on this is not only the relatively high proportion of architects working in local government compared with other professions, but the levels at which they are employed. Taking the total staffs of 43 city and borough architects' departments (those for which staff returns are available for 1959), nearly three-fifths of the qualified staff were to be found in the most junior grade (N.J.C. Grade III/Special scale, with the salary range £785-£1,070); and for the county architects' departments as a whole, the corresponding proportion was more than half. (These proportions of course cover wide variations between individual departments.) This again suggests that a dilution of professional staff has occurred. In this connection, the conclusion of the *Ad Hoc* Committee's report on salaries and responsibilities of senior architects in local government is worth recalling: 'greater efficiency, in terms of low cost per £ of work done, can be achieved through the employment of a relatively high proportion of staff in the more senior grades'.

30. The Professional Relations Committee are hoping to follow up this report with

## General comments

### (a) Public recognition

'The context in which we have made our inquiries is that of a National Health Service, a service intended to be available to the whole nation; if the nation wants the benefits it must accept the cost, and provide the means to ascertain the facts and to do financial justice, neither less nor more, to those who work in that service' (paragraph 8 of the report).

31. One would like to be able to say the same for the service of architecture, but to too many people the profession still seems to be optional, a near-luxury. Its contribution to living is thought of as pleasant but inessential, and therefore not

worth paying a high price for. To quote from another paper: 'Doctors may be respected because nobody wants to die; lawyers because without them the verbal refinements of their calling cannot be safely interpreted; and clergymen partly in admiration of the good life and partly through suspicion, even in the mind of the unbeliever, that they may be right'. But it is another matter to sell architecture to a nation of shopkeepers (and aldermen) who pride themselves on sturdy common sense, suspect aesthetic sensibility, live and work in a 19th-century industrial environment, and have literary traditions of education, not those of visual art.

32. Yet if the profession can never actually be as indispensable as medicine, it could come to be regarded as such through a combination of outstanding performance and astute public relations. It may be that the profession has too great a fear of 'public relations' which has, rightly or not, become an integral feature of modern life. The direct competition of the 'all-in service' is openly expressed in expensive advertising campaigns, on which far more than the total income of the Institute is being spent yearly. How much do the public know about the contribution which the profession has made towards offering better value for money in building, e.g. schools, CLASP? Architects are possibly unduly conscious of the impact on the public of the imperfections of the profession. Might it not be worth while countering this by collecting and giving greater publicity to the success stories of modern architecture? (This is not to say that we should not at the same time strain all our efforts to make architects more efficient—but it will be many years before the profession has worked out of its system the existing imperfections; and to delay a more aggressive policy until then would be too late.)

### (b) Professionalism

33. It has been pointed out that the way architects are distributed among different kinds of occupation is a material factor in their low income position. It may be that this distribution pattern (paragraph 10) merely reflects society's needs and should not be artificially disturbed. Twice, however, this year (by the Minister of Housing and by the building societies) we have been asked whether our professionalism is not too rigidly conceived for modern conditions. If there is any substance in this, a change of outlook if not actually in the Code might be reflected in the profession's overall income.

34. It must always be difficult to seek to operate with the freedom of an artist (necessarily optional) yet simultaneously, through working in an economic context, to hope for the rewards of an essential profession. The preamble to a paper on architects as directors of building companies, published with the Council's authority last year, says 'Of itself a change

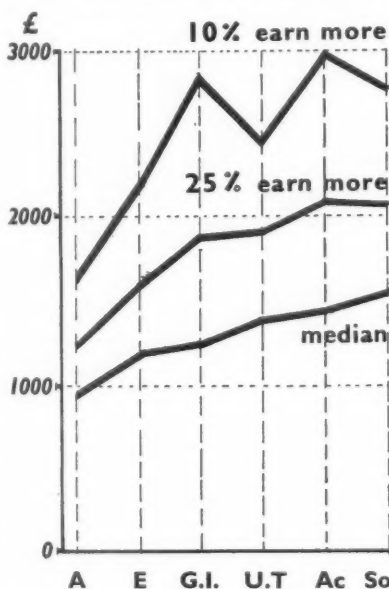


Fig. 3. Incomes of salaried employees outside private practice



Table 1. Incomes of principals and assistants in private practice

	ARCHITECTS	SURVEYORS	ENGINEERS	ACCOUNTANTS	SOLICITORS (England and Wales)	GENERAL MEDICAL PRACTITIONERS	GENERAL DENTAL PRACTITIONERS
PRINCIPALS IN PRIVATE PRACTICE							
1. Principals as a proportion of the total in the profession .. .. .	25%	27%	2%	33%	62%	79%	84%
Incomes							
2. Median incomes .. .. .	£1,621	£2,041	£3,368	£1,665	£2,212	£2,023	£2,055
3. One-quarter earned less than .. .. .	£987	£1,312	£1,725	£1,084	£1,448	£1,483	£1,357
4. One-quarter earned more than .. .. .	£2,406	£3,168	£6,712	£2,500	£3,348	£2,618	£2,781
5. One-tenth earned more than .. .. .	£4,053	£5,432	£12,082	£3,903	£4,816	£3,118	£3,706
6. Average capital outlay (a) .. .. .	£1,995	£3,927	£7,336	£3,907	£3,844	Figures not on a comparable basis	
7. Ratio of capital outlay to median income (6 : 2) .. .. .	1.2 : 1	2 : 1	2.2 : 1	2.4 : 1	1.7 : 1		
SALARIED EMPLOYEES IN PRIVATE PRACTICE							
1. Assistants in private practice as a proportion of the total in the pro- fession .. .. .	18%	34%	4%	16%	14%	6%	11%
2. Number of assistants to every ten principals in private practice .. .. .	8 : 10	9 : 10	30 : 10	6 : 10	3 : 10	0.8 : 10	1 : 10
Incomes							
3. Median incomes .. .. .	£802	£885	£1,050	£773	£762	£1,000	£1,443
4. One-quarter earned less than .. .. .	£698	£730	£901	£683	£652	£900	£1,138
5. One-quarter earned more than .. .. .	£998	£1,063	£1,437	£961	£916	£1,100	£1,786
6. One-tenth earned more than .. .. .	£1,210	£1,311	£1,928	£1,330	£1,109	£1,200	£2,079

(a) Payments by principals in private practice for goodwill and other capital invested in the practice; payments made and to be made for share of partnership assets.

Table 2. Incomes of salaried employees outside private practice

	Proportion of total in the profession (a)	Median incomes	One-quarter earned less than	One-quarter earned more than	Ten per cent earned more than
Salaried employees (including Chief Architects) in public service, commerce and industry, teaching, etc.		£	£	£	£
Architects .. .. .	47%	941	783	1,246	1,669
Surveyors (excluding those in public service and non-professional employment) .. .. .	(b)	(1,090)	(850)	(1,448)	(1,872)
Engineers .. .. .	84%	1,186	949	1,596	2,200
Graduates in industry .. .. .	100%	1,260	920	1,900	2,840
University teachers .. .. .	100%	1,380	1,023	1,919	2,467
having no subsidiary income .. .. .	22%	1,066	850	1,450	1,806
Solicitors—Scotland .. .. .	18%	1,300	887	1,689	2,050
England and Wales .. .. .	20%	1,570	1,146	2,075	2,750
Accountants .. .. .	42%	1,442	1,059	2,100	3,011
employed in a non-professional capacity .. .. .	11%	2,100	1,430	3,040	4,300
Actuaries .. .. .	96%	1,940	1,460	3,196	5,438

(a) In most cases the proportion shown relates to those members who are engaged wholly in this field of employment, with no subsidiary income from other part-time occupations.

(b) About one-half of all chartered surveyors, those employed in public service and any in non-professional employment, are excluded from the survey. The group included in this table covers 14 per cent of the members in the survey.

in the Code is perhaps not crucial, and certainly not a panacea. Nobody suggests that it would be the answer overnight to the all-in service challenge. The subject does, however, serve to focus attention on a central dilemma of greater importance: whether to regard architecture as an integral part of building and act accord-

ingly; or sharpen the distinction between them, widening the gulf between the artist-consultant on the one hand, and the commercial constructor on the other? Whether, if the "separatist" course is chosen, that will restore whatever dignity, prestige and influence the profession is thought to have lost, or merely invite the modern world of

big business and high finance to bypass the profession and to let it quietly fade? Whether in the times ahead one can maintain architecture balanced on the razor edge between an art and a profession, inevitably lacking some freedoms of the one, yet forgoing many opportunities of the other? Whether, therefore, in profes-

sional conduct matters to go for a brief Code, allowing maximum latitude, and simply expressed in terms of broad principle, but rigorously interpreted and enforced; or to retain a detailed Code that attempts to identify and proscribe all irregular activities that could be harmful to architecture?"

### (c) Recruitment and training

"There is, of course, no unchallenged body of principles to indicate what is the proper level of earnings in any profession nor what should be the correct relations between the earnings in different professions. Such expressions as "fair comparison" or "internal relativities" have little value as a guide to policy; and they often lead those who employ them to imagine that they have found a solution when they have only found a phrase. The relations between the earnings of the various groups will always be in process of change, sometimes slow and sometimes swift, with every shift in the supply of or demand for the services of the groups. This clearly is as it should be; it would be inadvisable to try to clamp down on professional earnings a rigid pattern insensitive to the varying needs of society and to the changing appeals of the different kinds of professional work.

"In the absence of doctrine which would determine uniquely the place to be taken by any one profession within the whole hierarchy of professions, there seems to be no escape from pure guesswork or personal preconceptions other than the test of the market: whether, that is to say, present and proposed earnings are sufficiently high to provide enough new entrants into a profession to match requirements. The professions as a whole are in competition for the young people who each year prove to be of suitable calibre; one of the social functions of a pattern of professional earnings is to bring about a proper distribution of these people."

(Professor John Jewkes in a memorandum of dissent from the Commission's report.)

35. It seems clear that in terms of quantity there has been over-recruitment to the architectural profession. This may be challenged in the light of the present shortage of assistants. But, as has been pointed out, it is not the 'design' assistant for whom there is the cry, but rather an assistant with a different kind or level of training and skill. There has been no lack of students coming into the schools of architecture in recent years. From a trough in 1953, the number of first-year students has been rising fairly steadily. In September 1959 1,551 new students were enrolled at schools of architecture, 8 per cent more than the previous year. In all, there were 6,368 students at schools, of whom 70 per cent were at the Recognised Schools. Most of them will have started from an 'O' level standard of training. Very few of them were selected; they were accepted. Very few schools are faced regularly with a large surplus of good material from which to select the best.

36. It is likely that some 5,000 new architects will qualify between now and 1968

(the first year when architects with the two 'A' level standard of entry will qualify). The number of architects will thus continue to increase for a further period. But a gradual fall in the number of 'trainee' architects working in offices as unqualified assistants may be expected, as the emphasis in training moves to full-time courses. This underlines the need for a decision on the 'technical assistant' category.

37. The possible effect on future recruitment of the disclosure of the low level of architects' earnings must be considered. It is important that this should not discourage the potential entrant of good intellectual quality whom we wish to attract. It may be desirable to direct some special publicity at schools and school leavers, implying that only the best will be good enough. At present one hears it said that architecture will do for the fifth-form boy who leaves still muddled by figures, bored by words and confounded by logic but having a freak facility with a pencil.

38. The introduction of the 'A' level standard of entry from September 1961 is the first step towards improving the quality of new recruits. As a corollary, a fresh look may be needed at the content of architectural education that will take account both of higher intellectual standards and the needs of architectural practice tomorrow rather than today. The officers of the Board are considering planning a conference on this subject later in the year, on similar lines to the 1958 Oxford Conference. This may or may not take in the crucial issue of compulsory practical training, which is at present in the care of a special committee.

### Proposal for a Review Body

39. The Royal Commission have recommended the appointment of a standing Review Body, consisting of seven independent persons of eminence and experience to advise the Prime Minister about the remuneration of doctors and dentists in the National Health Service. In order that the Body should have adequate information about the earnings of members of these and other professions, the Board of Inland Revenue should collect and make available to the Review Body information about professional earnings, the information to be published to the extent that the Body may determine.

40. It would be extremely valuable for the Institute if information of this kind were available at regular intervals. It is therefore suggested that the Council might express their support for the proposal, and their willingness to have information about the earnings of broad groups of architects made available for this purpose (so long as information about individuals and small groups of people is not disclosed and cannot be deduced).

### ACTION TO BE TAKEN

41. The Council decided that immediate action should be taken as follows:

(1) The Policy Committee will look at the overall implications for the Institute of the Royal Commission's report.

(2) The Professional Relations Committee will be responsible for co-ordinating the work of all those Committees of the Institute who are affected by the report, namely:

Practice, Management, Technical Information, Public Relations, Board of Architectural Education, Committee on Technician Class; Classes of Membership; and Practical Training.

Copies of the paper will be circulated to these Committees who will be asked to consider as a matter of urgency the points which particularly affect their work.

(3) The Allied Societies will be asked to consider the paper and submit their observations.

(4) The Secretariat will go ahead with preparations for a comprehensive survey of architects' offices to meet the various needs outlined in the paper (paragraphs 23, 24 and 30). Attempts are being made to raise money outside the Institute (e.g. from industrial companies with interests in the building industry, foundations, etc.) for special research appointments since the Institute has not sufficient resources free to undertake more than the general direction of the survey.

(5) The County Architects' Society and the City and Borough Architects' Society will be invited to comment, in particular upon how far the levels at which staff are employed are dictated by the wishes of the Chief Architect and how far by questions of 'parity' with other departments.

(6) The Association of Official Architects will be invited to comment, in particular upon how far they think it practicable to take action in concert with, for example, local government engineers and surveyors.

(7) A letter will be sent on behalf of the Council to the Government (Minister of Health and Chancellor of the Exchequer) expressing support for the Commission's proposal that the Board of Inland Revenue should collect and make available information about professional earnings (paragraph 40).

(8) This paper will be published in the technical press.

# Design Problems of Space Travel

by Tom Margerison, B.Sc., Ph.D.

Given at the R.I.B.A. on 5 January, The President, Mr. Basil Spence, in the Chair

I FEEL something of an impostor coming along here today, because here I am speaking at the Royal Institute of British Architects knowing nothing about architecture and not liking very much most of what I see going up in the City of London at the present time.

However, I have come here to say a few words about a subject of the future, and as all architects deal with subjects of the future—some of your subjects, indeed, never seem to come off at all—I suppose it is quite appropriate that I should be here, particularly as we are at the beginning of the 1960's, a time when it is interesting to look ten years ahead and see what sort of things may be happening then. Also, I feel that the subject about which I shall speak, which is not quite so forbidding as the title sounds, is one which ought to be of interest to architects generally.

I think, in my innocent way, that architects must be concerned with environment. In fact, their contribution to civilisation has been to make it possible, by enabling us to control our environment in this country, to keep out the rain and the wet and to provide working conditions in which life can continue. But one of the difficulties that you all face is that because the environment does not change, or changes only very slowly, you tend to take it for granted. One tends to forget that the main purpose of a building is to provide a neat little environment in which it is pleasant to work and to live.

I have been most interested to see that as we spread farther afield from the temperate regions, from the home of architecture, both into the tropics and, more recently, into the cold lands of the north—into the north of Canada and, possibly, even to the North Pole and to the Antarctic—we need to think again about environment. As a result of this, some very exciting architectural possibilities have emerged. There is, for instance, the possibility of building those domed towns in the Far North, where what is provided is not only an environment in which to work and play, but also a completely controlled environment in which all the normal functions of recreation, and so on, can take place.

Tonight, therefore, I want to turn your eyes a little bit farther to the areas outside our present ken, or fairly well outside it, to the regions of space which during the last two or three years we have seen explored by satellites, by rockets and by a few dogs and other living things which have been shot up there for short times. I want you to think of the sort of problem with which an architect would be faced if he were required to build a structure of some kind in space, or on the surface of

the moon or anywhere else. I find this a fascinating and amusing thing to think about.

First, let us talk about the sort of environment that exists in those regions. The first thing is that as we go upwards, the atmosphere becomes thinner; and as it becomes thinner, so we notice several terrible effects. First, it becomes lacking in oxygen. In fact, those of you who have flown in non-pressurised aeroplanes may have noticed that when travelling at a height of about 8,000–10,000 ft. one can begin to feel the effects of lack of oxygen. As you go higher still, the effects produce unconsciousness. For example, at 30,000 ft. you would be unconscious in about two minutes. At 50,000 ft. it would be much quicker, in about twenty seconds.

I must digress for a moment and say that the effects of lack of oxygen are not altogether unpleasant. In fact, they are very much like those of drunkenness. Aeroplane pilots who have flown experimentally, or have tried experimentally in chambers on the ground, to see what happens at these low pressures find that they become euphoric. They are having a wonderful time. They do not realise that anything is wrong with them, and this makes the condition all the more dangerous.

One fascinating thing is that it is possible to tell at once that that is happening to these people, because their ordinary actions become greatly enlarged, rather as they do in drunkenness. Instead of writing with neat, precise handwriting, their handwriting becomes progressively more and more sprawly as their oxygen lack increases. So that the first thing we have to remember is that in this new environment which we are going into, something must be done to provide the people who are going to live there with oxygen that they can breathe.

The next point is that not only does the oxygen become scarce in the atmosphere as we go upwards until we have virtually no atmosphere at all, but also the other gases become scarce too. In other words, what happens is that the pressure of the atmosphere decreases. This has another very serious effect. It means that if you go to heights above about 70,000 ft. your blood or any other liquid—for example, the water in your lungs—begins to boil. So that you have not only to provide oxygen, but you have also to provide a space suit or a cabin in which a pressure of gas can be maintained in order to stop the poor man boiling away. He would not boil away out of heat. He would boil at merely normal temperatures because of the reduction in pressure.

The third thing is that one is faced with problems of temperature rise. While there

is an atmosphere, there is a sort of smoothing out of temperature. The air takes up the temperature produced by the sun beating down on it. Then, temperatures are exchanged with the air and the air makes sure that if you get too hot by radiation of the sun beating down on you, as when you sunbathe, the air carries away the heat and keeps your temperature more or less uniform. But when you go up to very high altitudes or to the fringes of space, there is so little air there that it cannot carry away any heat at all. The result is that when you are in the direct sunlight, your temperature on the surface would rise very quickly. On the other hand, the moment that you went into shadow, your temperature would fall equally quickly.

Let me give you some idea of the situation from some calculations that were made on aluminium plates which were painted in different colours. If you got a piece of aluminium painted white and placed it in the sun, its temperature, surprisingly enough, would be relatively low. If you get a black piece of aluminium, the temperature rises at once and very soon reaches a temperature well over the boiling point of water, 122° C. If you get a piece of shiny aluminium, because of the selective absorption for the light, you find that it rises to still higher temperatures of up to 428° C. This is when it is in the direct sunlight. If, however, you have it facing, not the sun, but the earth, and that part of the earth in which it is night, it does not make much difference whether it is black, white or shiny aluminium. The temperature is very low, about -30° C.

It will be seen, therefore, that with anything you care to build or do out in space, you are faced with this terrible problem of getting the temperature right. If you have it too absorbent of the sun's rays, you find that the temperature shoots up to too ridiculous levels. If you have it the other way, if it is too reflective, you find that you are working at a temperature which will be far below zero, which is equally undesirable.

In practice, this problem has already been solved, because the people who have designed satellites have wanted to keep the temperature of the instruments contained in the satellites at a reasonably uniform level, round about ordinary room temperature. They find that by coating the outside of the satellite with a very elaborate mixture of layers of different materials, they can match the temperature so that it absorbs just enough light from the sun and loses just enough, and the temperature is uniform.

To give you some idea of the complexity of this sort of thing, what they do is to coat the aluminium that they use for the



covering of the satellite with a layer of gold, a very thin coating. On top of that is a thin coating of chromium, and on top of that a thin coating of oxide of silicon; then, a layer of aluminium and, finally, another layer of silicon. By doing this, it is possible to produce a coating that will absorb just the right amount of energy from the sun and emit just the right amount of energy from something at about room temperature to keep its temperature stable.

The question of keeping the temperature right is fairly obvious, but there are other things too. One that people might not think of is illumination. The atmosphere not only acts as something which keeps the temperature uniform. It also helps us by providing a nice, diffuse kind of illumination which does not make the eye have to see too wide a variation in intensity of illumination.

If you go above the atmosphere, you lose this quality which produces a fine white or blue sky, such as people who live in Italy enjoy, and gives us a uniform illumination. In fact, the people who go up into space will find that the sky is black and that the sun comes out of this with great intensity very strongly indeed.

Thus, anyone who wore a space suit or anything of this nature outside a space station or satellite would have to have very heavily tinted glass in the mask of it; or if, at a space station or something built out in space, it was felt necessary to have windows so that the people could make observations and see what was going on outside, those windows would have to be very carefully constructed in order that the people inside were not blinded by the tremendous intensity of the sun's rays.

The same thing applies, of course, to the ultra-violet rays of the sun, which are immensely strong, so strong that just on the fringe of the atmosphere, only a relatively short distance above the earth, you would suffer sunburn fifty or a hundred times as fast as you do at the hottest place on the surface of the earth. Again, any space suit or window that was provided in a space vehicle would have to be constructed in such a way that it stopped this ultra-violet radiation—not that that is very difficult.

The last of the effects of the sun is that it gives off X-rays and other atomic particles. We now know that these atomic particles have congregated into two girdles round the equator, one of them inside the other, and that in these belts, which are formed by the effect of the earth's magnetic field on the particles as they come close to the earth, they bend round and they trap these fast-moving particles moving to and fro, almost like a lion in a cage, across the equator area at considerable altitudes. If, however, you were to put a space vehicle into that region without taking suitable precautions, you would soon find that you had killed off your men with the large intensity of radiation. It would be the same as living just in front of a fairly powerful X-ray generator. Therefore, some sort of shielding would be necessary to protect your men from this radiation while

they were inside the area in which the radiation is so intense. Once they got outside, however, there would be nothing to prevent them from walking about in a space suit on the outside of their vehicle.

The last of the major hazards, or what might be a major hazard, are meteorites or shooting stars. These get heated when they enter the top of the atmosphere and we see them as a rather dazzling display on certain days of the year. But the number of meteorites is very considerable and they are moving at high speeds, so that we have to consider the consequences of a collision between anything that we build in space and these meteorites. Most of them are fairly small. The biggest ones that anybody is at all likely to come across are about the size of a pea.

We can work out how thick a layer of aluminium or some other metal—aluminium is a good one—is required in order to prevent one of these meteorites of any given size from penetrating and how much armour is needed for protection. This can be done quite easily for a pea-sized meteorite, which weighs about  $1\frac{1}{4}$  grams. In that case, 11 cm. of aluminium is needed. But the chance of this happening in any one day is extremely small. In fact, it is just over 100,000,000 to one against its happening. So you might think that you could take the risk of meeting a pea-sized meteor and say, 'If I do, it is just too bad.'

But little ones, too, can have a very staggering effect. For example, a meteorite which weighs one-ten-thousandth of a gram might be encountered. You can imagine what a tiny thing this is: it is 0.02 mm., or one-fiftieth of a millimetre, across. You could expect it to penetrate, roughly, aluminium plate half a centimetre thick. Again, however, the chances of its happening are not very great, because there are not all that number of them, and the chance that it will happen in any one day is about 10,000 to one against.

If you go to smaller sizes of things, to meteorites weighing a millionth of a gram or thereabouts, the chances become much higher because there are many more of these and the chance of being hit by one of them is about 100 to one against; so that if you are up there 100 days, it is fairly likely that you will have been hit by one. Even these tiny things, weighing a millionth of a gram, will penetrate 0.1 cm., or 1 mm., of aluminium sheet.

You must, therefore, do something about it. You have to decide how big a risk you can take and, having decided that, you fix the thickness of the aluminium sheet that will protect you. You can make yourself still more certain of being safe against meteorites by coating the inside of your aluminium sheet with a layer of what I call goo, the sort of stuff that is used in petrol tanks to prevent leaks. This was the technique used during the war when a bullet hit a petrol tank. The goo flowed into the hole and prevented the petrol leaking out.

That is one form of damage that you will get from meteorites, but there is another form that is less obvious. I have

told you of the elaborate precautions to be taken to get the surface of the space vehicle or space station coated in such a way that it keeps its temperature just right. There are very large numbers of extremely small meteorites which have a general eroding effect on the surface, just like driving a car through a sand-storm. If you run into a cloud of these things, you will wear away or erode some of the carefully prepared surface. There is, therefore, the risk that you will erode the surface, and as soon as you have done that, the occupants of your space vehicle will begin to fry.

Some calculations were done on this a short time ago. As far as we can tell from the satellite experiments, which have all carried little erosion gauges to see how fast the material wears away, it looks as though you are safe for a year anyway before you get marked deterioration of the thin surface layers that you put on your skin to keep its temperature right.

Those are the main items of environment that the first people who go into space will have to face, but there is one other item which is rather different, and that is weightlessness. The weight of your body is made obvious to you by its reaction against the floor. If you were to fall freely—for example, if you were unfortunate enough to be in a lift in a sky scraper and the wire broke and it did not have appliances to stop it from falling—you would find yourself in a state of weightlessness. The point I want to make clear is that nothing would have happened to the force of gravity. Your weightlessness or lack of weightlessness depends on your relationship to the environment in which you are, the local environment of, in this case, the lift cage. It is really a dynamic effect produced by the motion of the vehicle itself.

If you were to be fired in a rocket, once the rocket engines had ceased firing and you and the rocket were moving together in the gravitational field, you would become aware of this weightlessness, although, of course, you would not be outside the earth's gravitational field. Gravity is still there. It is less than it was, but it has not changed. It is simply this question of free fall.

We can simulate this in various ways on earth. A man who dives off a high board is able, while he is in the process of free fall, while he is actually coming down, to execute the most elaborate contortions and turn himself over, in just the same way as a man would do in free fall, except that he has the air rushing past him.

This business of weightlessness can be simulated by flying an aeroplane on a course so that it is falling at the same rate as the person who is inside it. We have been able to find a length of film, which some of you may have seen before, which was taken in England the year before last, when a friend of mine decided that it would be rather fun to see what it was like to be in this weightless condition. The aeroplane cannot simulate it for very long, because it would eventually hit the earth and the man must come out of his dive, his parabolic

path. Therefore, it goes on only for a relatively few seconds. I have not seen this film before—I have only heard the accounts of it from the men who took part, both of whom said that they felt extremely sick.

Let us look at it and see what it has to show.

(Here followed a short film, *Gravity Tests for Spacemen*. Unfortunately it has not been possible to obtain a 'still' from the film.)

I had to choose between this piece, which I had not seen, or a film of some little mice doing the same thing, and I thought it would be more fun to see the men.

You saw there some of the troubles that are likely to be encountered through weightlessness. The first of them is that it feels extremely odd not to know which way is up and which way is down. There is no sensation at all. A man can be upside down without realising it. When he appears on the screen completely upside down, to him it is the aeroplane that has turned over. He does not realise that he has turned over.

The second thing is that water and other things do not drop downwards. This presents quite considerable difficulties. It means that if I were to get a glass of water and pour it out, the water would simply stay in a puddle. You will notice that that was not very accurately a state of weightlessness. The man, in fact, was drifting about a bit, but here we could have a puddle of water simply standing. This makes drinking and other operations rather difficult. The man has to drink through a straw.

There are other rather more subtle difficulties that will occur to you when you think about it. For instance, if you light a match under these conditions, in the normal way the carbon dioxide produced by the burning match is carried away by the heat of the flame; more oxygen comes in round about and the match goes on burning. Under completely weightless conditions, however, when you strike a match it uses up the bit of oxygen just round about and then it goes out because there is nothing to bring the air in. Of course, the flame is not the shape that we are accustomed to, coming up to a point at the top. If you get any flame at all, it will presumably be symmetrical and round.

Another point is that you are likely to suffocate under this condition if you are not careful, because when you breathe out, you breathe out carbon dioxide, which in the normal way, because it is at a different temperature from the air round about, will disperse fairly quickly. Under weightless conditions, however, when you breathe out and then breathe in, the same bit of air comes back in again. One is faced with many difficulties of this kind.

I told you a moment ago that the friend of mine who was on the aeroplane when the film was taken said that he did not care for it very much. It made him feel very sick; in fact, he was very sick. He did not say whether this proved disastrous under weightless conditions. Many people, however, have said that it is a pleasant sensa-

tion. I have with me a book in which it is reported that one man said, 'I never felt as well in my life. If I could pick my own way of resting, my choice would undoubtedly be to be weightless all the time if I could.' That was after spending 47 seconds in this state. Another quite old man, aged 46, with lots of experience of glider flight, states that while he could know which way up he was when doing aerobatics, during the time he was weightless he had no sensation whatsoever of position.

(A number of slides were then shown.)

Those are the disadvantages of weightlessness. It has some advantages, too, as can be seen (slide). The man at the bottom, who walks at 2 m.p.h., uses three times as much energy as when he is resting. The man who is in the weightless condition is feeling very happy, because he has only to give a slight kick from the wall and he goes scooting across the room without the expenditure of any further energy. The only further energy he has to expend is when he reaches the other side and wants to stop, and he has to put his hands out and stop himself. This is, in fact, the embodiment of Newton's first law of motion that when you set something in motion, it goes on moving until you stop it. So that this is really rather an advantage.

On the other hand, it has certain amusing disadvantages. One of them is that if you sneeze or cough, according to a calculation I did this afternoon, that immediately starts rotating you at one-fifth of a revolution a minute and you go on rotating until you stop yourself. There is also a great difficulty if you are required to drive your space vehicle or do any sort of work. Someone else has worked out that if you depress a lever like a brake lever on a car, you would find that you moved the lever all right, but you would shoot up at 60 ft. a minute and tumble head over heels at 3½ revolutions per minute.

So that in considering how people can be made to live under these conditions, it is desperately important to decide how far their ability to carry out simple operations or to do anything at all is affected by a state of weightlessness and how far it is possible to remedy that by artificial gravity—for example, by spinning the space station, or whatever it is, so that the centrifugal force gives some degree of artificial gravity.

The next point concerns the question of the atmosphere that the people in the space vehicle or space station will breathe and the food that they eat. Obviously, it would be expensive to replenish food and gas, air, oxygen, nitrogen, and so on, from the earth. You have, therefore, to try to obtain a closed system inside the space station.

There is one very easy way of thinking of this, and that is to think of the earth itself, which, of course, is a closed system. On earth, there are large numbers of plants, which absorb carbon dioxide from the air and convert it into sugar by combining it with water. They do this under the influence of light. The by-product or waste

product of this process is oxygen, so that the net effect so far as the atmosphere is concerned is that the plants are removing carbon dioxide and water and giving out oxygen. At the same time they are making sugars, which go on to make proteins, fats and other things, all of which are good to eat.

On the other hand, the animal part of the world's population breathes in oxygen and uses sugars and other things as fuels and burns them and converts them into carbon dioxide and water and heat. So that by balancing the number of plants with the number of people and animals living on the earth, we find that the constitution of the atmosphere remains the same. As fast as the plants remove carbon dioxide and water, the animals return it. Because the earth is a very large place and there are lots of animals and plants, and the atmosphere is also of very large volume, the whole thing works very well and the equilibrium is extremely good. There are, however, signs that we have upset it slightly by burning a lot of coal and introducing a lot more carbon dioxide into the atmosphere since the Industrial Revolution.

One can think of this equilibrium or balance between plants and man on a unit scale, on the scale of one man. It has been found that one man is equivalent in balance with 2.3 kg. of pond scum. The pond scum gives off just the amount of oxygen that he needs to take in, and he gives off just the amount of carbon dioxide that the pond scum needs to make it grow.

More recently, it has been discovered that there are some other rather similar organisms called blue-green algae, which are even more efficient at this exchange. In the United States and elsewhere, there have been attempts to see how far these primitive plants can keep animals alive and on how small a scale it is possible to work this ecological balance between plants and animals. Three mice succeeded in living for over a month in equilibrium with the appropriate amount of pond scum. Experiments are going on to see what happens to man in exactly the same circumstances.

But the cycle is a little more complicated than I have indicated, and perhaps we had better look at it on a slide which shows the full thing. It is applied to a space cabin. On the left-hand side, the cabin atmosphere plus the liquid and solid waste from its occupants—this is a rather disgusting business—are fed into a separator. The constituents of the air in the cabin, which have not been used, are separated out at the top and they go back into the cabin atmosphere. The carbon dioxide plus the processed material, as it is rather coily called, goes into the photo-synthesis reactor, but the essence of the thing is that it is filled with water. It has the pond scummy things growing in it and it is fertilised with the excreta of the men. There, the pond scum produces its oxygen; the oxygen bubbles off and is fed into the cabin atmosphere. The liquid and solid that remain are separated out and the pond scum is cleaned and purified. You will see that it emerges at the bottom as food.



In the meantime, the water is also purified and the space-men drink this. So that we start with a nice atmosphere for them to breathe with oxygen and nitrogen in it, refreshed by the extra oxygen from the pond scum. They have water to drink and this dried pond scum to eat. I have eaten dried pond scum. It is not very nice. As a matter of fact, it clogs up one's teeth. Some nice way of processing it will have to be found.

A further factor involved is that it causes constipation. To overcome this little difficulty, it is suggested that the space-men will also eat cellulose, cotton wool or something of that sort, to pad it out a little.

You will see that things are still at a very early stage. It is not a diet I would care to go on. In fact, I hope that the men now doing these experiments in the United States and also in Russia are well paid for it.

Here we have a picture of the sort of thing that might be used as the actual reactor, the place in which the pond scum grows. The great thing is that they need light in order to grow, yet, like human beings, they are rather badly affected by extremely violent light such as we would get from the sun in space. Accordingly, it has been suggested that we should use a kind of artificial illumination which is just coming into use in the latest American cars to illuminate speedometers and other gadgets. These are thin plates of electroluminescent material. When a voltage is put across them, they glow a sort of greenish colour. It is suggested that this would be a good way of illuminating in a predetermined manner the pond scum that is used to produce the oxygen. The power to run these things can be obtained from solar batteries on the outside of the vehicle.

I have talked a lot of theory. I thought you might like to see some of the ideas which have been put forward for actual structures in space. Most of them, I think, are 'screwy', but there are certain points that must be borne in mind which are very interesting from an architect's point of view. One of them is that weightlessness may be a bit awkward and embarrassing for the man, but from the viewpoint of the architect it is really a splendid thing because he does not need to worry at all about the deadweight of his structures. In consequence, although it is very costly to get heavy materials out into space, this is not as big a disadvantage as it seems, because it is possible to use a lightness of construction which cannot be matched anywhere else.

This slide shows an idea put forward by a man called Romec to build a fatuous thing, a town for 20,000 people, in space as a satellite. The only thing I cannot find out about it is why he wanted a town of 20,000 people, but you will see the essence of it. In the top picture, the stuff has come in a rocket from the earth. The poor men are darting about in a weightless condition moving bits of material and building out from a central core. The whole construction is extremely light. These people, we

hope, are not punctured by meteorites, but there is very little chance of that. They have protective suits. They would find the job of construction very difficult, because they do not know which way up they are and there is nothing to say which side of the structure they are working on is which.

Eventually, however, they succeed in getting on, and in this slide the whole thing is fairly well completed; they are putting on the last of the outer shell. That is one man's idea.

This shows another idea which was put forward by Smith and Ross. I included the slide primarily because it showed, first, how the sun can be used as a source of power under these conditions. The big mirror which has been built is extremely light. It is braced on the inside by cables, and at its centre point the heat is collected which can be used to generate steam or to do other things. It has been suggested by Fred Hoyle, in this country, that if we could do something of this sort, we could build an extremely large telescope in space as a satellite much larger than could possibly be done elsewhere.

For example, one of the difficulties about the radio telescope at Jodrell Bank is that although it is a paraboloid, its shape varies according to which way up it is, because of the bending of the beams out of which it is made. When it is pointing straight up, it may be an accurate paraboloid. When it is at an angle, the variation of loading causes distortion which is sufficient to spoil it as a perfect mirror. It is also distorted by wind and the like. Out in space, a large mirror could be built very lightly and there would be no difficulty with distortions of this kind.

This is an idea by Aubert for a satellite. I put it in to show you because there is no air—one does not need to worry about air resistance—and we could build the thing in whatever shape we liked in order to get special properties out of it.

This can be carried a lot farther. The Russians have their 'wild man', too. This shows their idea of the arrival of the first rocket to build a satellite space station. The man has got out, presumably through the hole. There must be an air-lock for him to get out. They have gone the whole hog (slide). They are not building a town with a population merely of 20,000, but a whole city in space, so it seems. This is a station which also was designed to have artificial gravity by giving it spin.

This is all fairly advanced stuff and we are nowhere near that stage, and, in fact, we may never be. I am pointing out, however, how easy it is to construct things, that one does not have to worry about deadweight when one gets into space and that one has only to worry about one-sixth of the deadweight if one builds something on the surface of the moon.

But we have to remember that before all these men arrived in outer space, they had to be launched, and during the launching process they have to withstand some violent accelerations. This shows the launching of a rocket to remind you what loud, noisy and violently accelerating things

these are. This is a preliminary hazard that everything in space must face. It must be able to stand the noise and vibration of the rocket motors during the few minutes in which they are working, and it must be able to stand the acceleration, which may be seven times that of gravity, which means that temporarily everything weighs seven times as much as it should. This means that if you are constructing anything in space, it must be packed in the rocket in such a way that it is not affected by this sudden increase in its weight which lasts just a few minutes. When I say that everything must be properly packed, I mean not only the engineering things, but the men or animals as well.

In this slide, you will see some X-rays of a poor monkey looking a little sad. X-rays of its body have been taken at increasingly large acceleration. On the left, it weighs the normal amount. Next, its weight has been increased to double and we can see how its whole skeleton is drooping downwards and its organs inside have dropped. In the third picture, it weighs five times its normal weight; it can no longer support its head and its organs have dropped right down. In the last picture, it is at 7.7 times its normal weight. Every part of it weighs 7.7 times what it weighs under normal conditions. Under these conditions, of course, if it is upright, as it was in these tests, organs come adrift inside it. It finds that it cannot pump blood to its brain, which is uphill, and the poor thing is in a very bad state. So that we have to take precautions. We have to have space suits and special beds or couches for the men or animals to lie on in order that they can withstand the immense acceleration during this take-off period.

I was going to mention, incidentally, one thing which I thought of great interest. In 1895 a Russian gentleman called Tsiolkovsky thought a lot about space travel, and he invented the idea of multiple-stage rockets. He was very much worried about the effect of acceleration on people, and he built for himself a model of a rocket which would carry three men to the moon. In the nose of it he had arranged symmetrically at 120 degrees three typical Victorian baths. His theory was that during the period of take-off the men would all lie down in the water and have a bath, and that the pressure of the water would help to support their bodies during the take-off period. He even provided hot and cold taps on the baths.

It is rather interesting that only recently, within the past few years, the Americans at least have been doing experiments on the effect of immersing the bodies of small animals in water or in a fluid of roughly the same density as their own body as a means of protecting them against accelerations.

One further hazard is the psychological factors involved in a take-off in a rocket. Being in a confined space, it is inevitably noisy and nasty, and the conditions very unpleasant, even though one is protected against real damage. Then, suddenly, everything goes quiet; there is no longer the

noise of the vibration. There is complete silence, in which some jet aircraft pilots, I believe, notice a feeling of absolute loneliness, which may have severe psychological effects.

Another thing, which we have not discussed at all, is how to get the men back again. This, too, presents major hazards. One of them is that during the process of coming back into the atmosphere, they are likely to be subjected to frictional heating as their space vehicle re-enters the atmosphere. Very fast-moving bodies (slide) have been experimented on in wind tunnels and elsewhere. This is simply a shaped cone to see the effects of a cone of this nature passing through the atmosphere. It has been shown that considerable heating will take place by this friction with the air.

Therefore, in order to prepare the poor men for it, they have had to try to see how well they stand up to heat. Here we see a man who has just emerged from a hot chamber. The door is on the left and the chamber is behind him. The temperature inside will be very high and the investigators are seeing whether he can do simple manual tasks while he is heated up to high temperatures. The amazing thing is what very high temperatures people can withstand. This was first appreciated some years ago, when it was found that men were walking into brick kilns which were still at air temperatures of up to 500° C. for a very short time.

There it is. Those are the sort of hazards that man will have if he goes into space. Let us quickly see two of the strange things that anyone will see who goes into orbit in space or enters a satellite space station (slide). The first is that the moon, instead of always appearing the same size, will appear to approach and recede in the manner indicated. The size of the moon will depend upon one's whereabouts in orbit round the earth. The second thing is that it will be possible, perhaps, to look out of the window and see the earth. The amount of the earth that will be seen will depend upon one's height above it.

There is an elliptical orbit which goes out some considerable way into space and then comes closer. When one is a long way out, one sees roughly one-third of the earth. When close to, one gets a quick glimpse at a much smaller part of it.

Perhaps one day, as space techniques advance, we may be technically able to build a space station. Who knows whether we shall want to or not? We might be able one day technically to build a little research station on the moon.

#### VOTE OF THANKS

**The President:** I would very much like to call on Mr. John Allen, of A. V. Roe Ltd., to move a vote of thanks.

**Mr. John E. Allen, A.F.R.Ae.S., A.F.I.Ae.S.:** I have thoroughly enjoyed hearing Dr. Margerison's talk tonight. I also rather feel, as he does, an impostor in being here. My only claim to fame, I

think, is that I live in a house whose environment is the better for having been designed by an architect who is a member of the R.I.B.A. Dr. Margerison is right in saying that the 1960's will show some staggering progress in this adventure into space, first by instruments and then, eventually, by man. Clearly, those of us who are designers will be watching this progress with great interest.

I would like to pay Dr. Margerison a compliment about the clarity with which he has put over to us very many complicated physical, electrical and gravity phenomena in a way which, I am sure, we can all understand.

I am reminded of an occasion when, before I knew Dr. Margerison, a senior official in my company came into my office and threw down one of my reports on to the desk saying, 'This is not good enough. You do not know how to write good, technical English. Nobody can understand this.'

He then went on to say that one of the best journals he had read recently was the NEW SCIENTIST, and that it would do me good to read it regularly, because in it I would find technical matter put over with great clarity. I learnt subsequently that Dr. Margerison was the editor of the NEW SCIENTIST. So, tonight, we have again confirmation of this clarity of expression.

Dr. Margerison has certainly done us all a great service in pointing out the reality of these hazards in space. It is very wrong to minimise what these hazards are and how much we have to learn in research, development and design to overcome these problems. Looking ahead, however—whether it is five, ten or fifty years, I do not know—I am sure that as the architect has provided the comfortable environments of home and office for us on the earth, so the vehicle designers and, presumably, eventually, the designers of habitations on the moon, will provide vehicles that will enable men to go on board in their lounge suits and perform their operations unhampered by the difficulties of which we have been told. That is the ultimate to which we should look forward.

*(Mr. Allen then showed nine slides illustrating the evolution of design in cars and aeroplanes and drew attention to the new design trends and styles to be expected in space vehicles.)*

On your behalf, I should like to thank Dr. Margerison very much indeed for giving us a very clear exposition of a fascinating subject.

#### DISCUSSION

**The President:** The meeting is now open to all members and guests who would like to take part.

**Mr. H. T. Cadbury-Brown [F]:** Is the space friction the same on the return as on the outward journey, so that there would be a repetition of the problem of heat for the human body?

**Dr. Margerison:** The problem arises on the way out as well as on the way back. In general, however, anybody who was returning to earth would approach the atmosphere much more quickly on the way back, thus enhancing those conditions. Mr. Allen, however, is the expert on this.

**Mr. John E. Allen:** It is fair to say that when leaving the earth by rocket, the aerodynamic heating is of very small consequence; because as you go faster, so you go higher, and as you go higher, so the air density becomes small. On returning, however, you have a tremendous kinetic energy which you then throw at the atmosphere, and the dominating design problem is to avoid the effects of heating.

On a typical ballistic warhead with a diameter of, say, 4 ft., there is 20–30 megawatts of heating on that surface for 15 seconds. It is a tremendous problem the like of which we do not know on earth. This has led to the creation of quite new materials and the evolution of new metals such as beryllium, and the use of nylon, which melts away.

**Mr. Reyner Banham:** Can we be told something about minimum conditions for human life? There are the great advantages of minimum structural deadweight for building in space, but the space station will be rotated and the people in it given some gravity by which they can walk about. Presumably, in doing this, some of the advantages will be lost. What are the minimum comfortable gravitational loads that one would need in order to walk about, and what are the other limits of air temperature for sustained human life?

**Dr. Margerison:** The conditions of pressure and temperature are fairly well known. They cannot be far different from those existing on the surface of the earth. We know from our present environment the sort of temperatures in which man can work. This is the sort of work that Bedford has been doing at the School of Hygiene and Tropical Medicine.

The facts concerning gravity are not fully known. It has been suggested that the gravitational attraction that a person needs is not very high. A person needs only enough to be able to determine which way up he is. Some of the design studies have been for an artificial gravity of the order of one-fifth of the gravity we experience on earth.

**Mr. Reyner Banham:** How fast would a large space station need to be spun to produce that much gravity?

**Dr. Margerison:** One can work it out fairly easily, but I cannot give the answer from my head. It depends, obviously, on the size of the space station. A big one, however, would not need to spin very fast. No energy would be used in doing it once the thing got going. It would have to be topped up a little bit because of the motion of the people inside. In general, however, you would need no energy once you got it

moving; so there is no need to worry about that aspect of it.

When I say that it would have to be topped up a little bit, this is because the coughs, sneezes and other things which tend to perturb its motion might not be completely random and might tend either to slow it down or speed it up.

**Mr. Banham:** You mean that everybody might walk about in the same direction?

**Dr. Margerison:** Yes, they might. A fascinating document was published last year by an American gentleman who had worked out the effect on the length of the day of the fact that in the majority of countries cars were driven on the right-hand side of the road!

**Mr. Allen:** I have done the calculation. A very big space station—say, 200 ft. in diameter—would need only five revolutions per minute to provide gravity. Presumably, therefore, only about 2 r.p.m. would be needed to give one-sixth of gravity.

**Mr. Banham:** Would the people get dizzy?

**Mr. Allen:** The very large reflectors of the very large telescope would have an axle and the crew compartment would be separate. The large structure would be orientated and fixed. This is how the problem would be overcome.

**Mr. A. C. Adcock [4]:** Is it necessary to have such enormous accelerations in order to leave the earth? Instead of, say, 7 G, is it not possible to leave the earth at 2 G or 3 G, merely taking longer to do it?

**Dr. Margerison:** No, it is not possible. A certain escape velocity has to be achieved. Again, I refer the question to Mr. Allen for a quick answer. Once you have escaped from the earth's gravitational field effectively, however, you can then have a very low-thrust rocket. But during the initial period, the large acceleration is required.

**Mr. Allen:** That is correct. The point is that you get off the earth by balancing your weight against the rocket thrust, and you achieve this rocket thrust by burning chemical fuel. Theoretically, we get the best efficiency by converting that chemical energy to momentum infinitely quickly. This is the theoretical optimum.

5 G is a practical compromise for the infinite G. Imagine that you reduce the thrust and reduce the acceleration until, eventually, you get a thrust which is equal to the weight and no more. The rocket would merely rise off the launcher by a few feet, burn its fuel, and get nowhere. You must, therefore, attempt to approach the theoretical optimum of infinite thrust for an infinitely small time, which is done at about 4 G.

The other way of getting into space is by means of high-speed aeroplane (as shown on Slide 5) which can fly at ten or

eleven times the speed of sound. This can take off with very low acceleration, almost like an ordinary aeroplane, and be used for launching off into space. The aeroplane launching technique is, possibly, a way which might be developed in the next ten years or so. One envisages the aeroplane going up just beyond the fringe of space, launching the space vehicle and returning to earth again.

**Dr. Margerison:** It is a pick-a-back device, with the rocket carried by a large aircraft. This overcomes the problem by getting lift from the atmosphere.

**The President:** These few very interesting questions on this fascinating subject draw this evening to a close. Personally, I have found the whole subject most enthralling and quite unusual. After being used to bird-shapes for aeroplanes, it is strange that on going through the speed of sound the flying machine takes on a fish shape as if it was in water—the whole subject is of that order, strange and interesting.

I am sure you would like me to thank Dr. Margerison for his most interesting lecture. I only wish that there were more students about in London to hear it, because they would have found it fascinating. It merely remains for me to thank Dr. Margerison, on your behalf, for this very interesting evening that he has given us.

*The vote of thanks was carried by acclamation.*

## M.L.C. Building—Perth, Western Australia

THE M.L.C. BUILDING, Perth, Western Australia, an office building of the Mutual Life and Citizens' Assurance Company Ltd., has received the R.I.B.A. Bronze Medal and Diploma for the period 1955–8. The award is made every three years for a building of outstanding merit erected in the metropolitan area of Perth, W.A., by a jury of assessors appointed by the Western Australian Chapter of the Royal Australian Institute of Architects.

The architects for the building are Bates, Smart and McCutcheon[F/A], of Melbourne, in association with F. G. B. Hawkins and Desmond Sands[A/A], of Perth. The builders were J. Hawkins and Sons.

The contract was signed in January 1956 and the building completed 19 months later, at a total cost of £A820,000.

The construction is rigid steel frame, with metal pan floors welded to the frame. Fireproofing is by light-weight concrete and plaster, largely prefabricated. Suspended ceilings of vermiculite plaster form the fire barrier to the beams.

The spandrels of the aluminium-framed curtain wall are of ribbed aluminium alternating with blue-grey toughened ceramic glass. The outer glazing of the double windows is of heat-resistant glass, and metal venetian blinds are hung in the 8-in. space between outer and inner glazing.

The building is air-conditioned throughout, with full temperature and humidity control. This provides comfortable working conditions in Perth's hot summer, where temperatures rise on many days to over 100° F., and on an average to the mid-80's.

All service outlets, including air, lights, fire detectors, telephones and electrical power, are planned on a modular grid, allowing flexibility of internal subdivision. The continuous-strip fluorescent lighting is in trunking which incorporates the air-conditioning outlets and is mounted on the underside of the fireproof ceilings.

The ground floor is set back a few feet to allow for a strip of garden at street level. The lift stair tower is faced with grey ceramic veneer and is surmounted by a weather beacon similar to those on the company's buildings in other Australian capital cities. The beacon, operated direct from the meteorological bureau, indicates weather forecasts by a simple series of signals in red and white lights.



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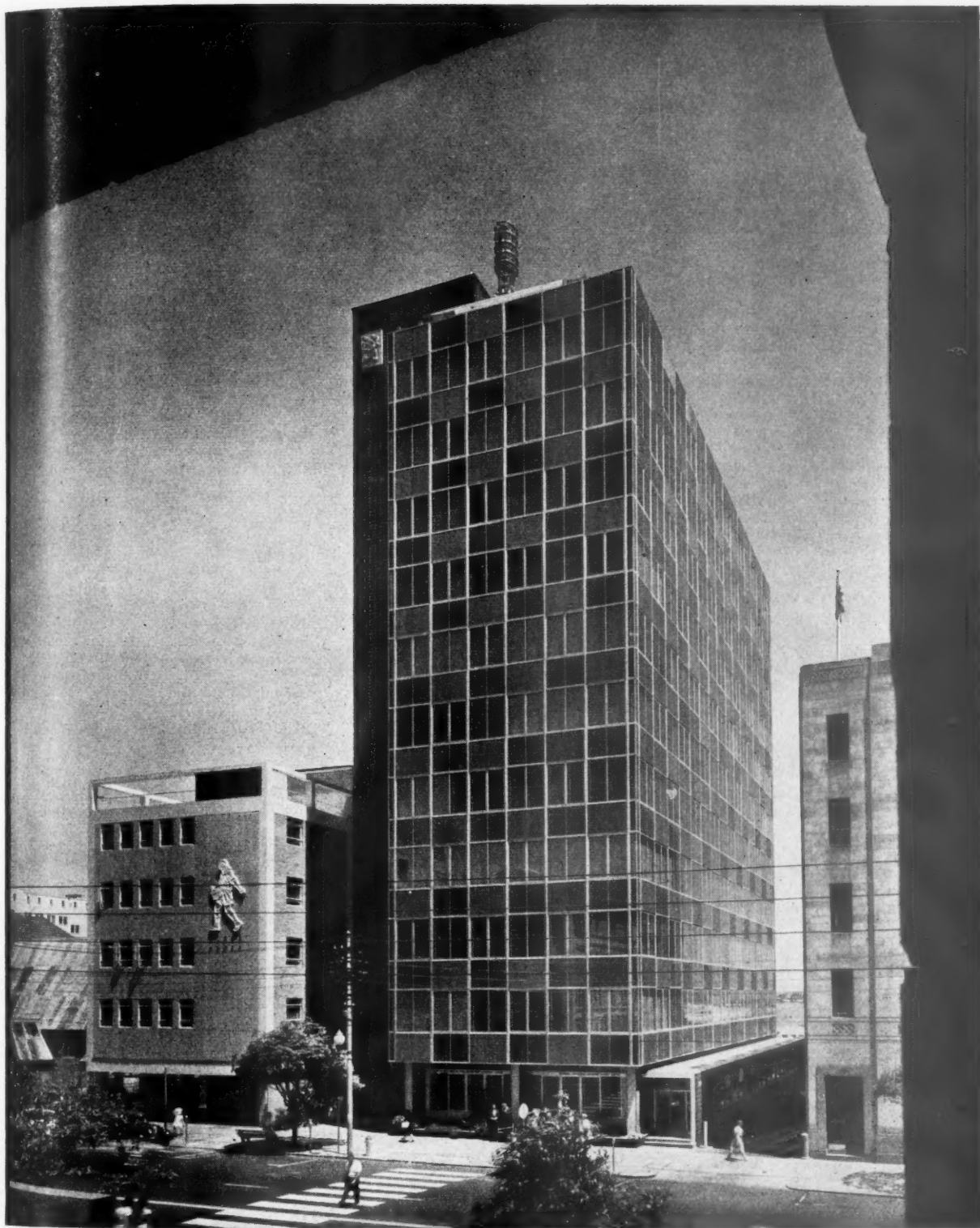
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The M.L.C. Building, Perth, Western Australia. Architects: Bates, Smart and McCutcheon [F/A]

# Criticism by Philip Powell, O.B.E., A.A.Dipl. [F], of Work Submitted for the R.I.B.A. Prizes and Studentships, 1959-60

At the R.I.B.A. on 2 February, the President, Mr. Basil Spence, in the Chair

**The President:** Ladies and gentlemen, throughout this period preparatory to the prize-giving and criticism by the critic, it has been customary for the President to address students. Now I feel strongly that this procedure is outmoded, it is out of date. You are going to listen tonight to a very reasoned and carefully prepared criticism of the work that many people in this hall have toiled over for the last few months, and I feel that that is quite sufficient, that you should listen whole-heartedly to one person. Far be it from me to pontificate to a band of students. I do not wish to do that. I also feel that in the days when this was instituted, perhaps things were slightly different.

I remember well thirty years ago when I was down *there*, someone else was *here*, that we used to go to the local near Conduit Street, and have a pint or two, and then we went to the R.I.B.A. just to hear what the old josser had to say. Now I feel it is rather the opposite, that the old josser should open his ears and listen to what you have to say.

So this will be the shortest address to students on record, and with that I would like to invite you to listen to the critic who, I must say before he starts, has had to work extremely hard to get together all these notes and criticisms. I have done it—I know. It is an extremely hard job.

It is really with the greatest of pleasure that I invite Mr. Philip Powell to read his review of the work submitted for the Prizes and Studentships, 1960.

**Mr. Philip Powell:** The R.I.B.A. critic is a parasite and a stooge: a parasite because he sucks up and sometimes destroys the creative work of others; a stooge because he is the mouthpiece of the jury and does not, by tradition, take an active part in reaching decisions—he comes to you this evening to put them over.

My desire to interfere with the juries I found difficult to suppress. But when they had gone home to forget their verdicts, they consoled me, I could collect their thoughts, distort them and publicly disagree with them. Very entertaining, but, to my sorrow, I have found that on every important point I have agreed with their judgements. How worthy and dull for me—and for you.

I cannot easily generalise on what I have seen, since the range of entries is so wide: an open-air theatre for an Italian nobleman, colour patterns in gypsy housing in Macedonia and a boating club and caravan park on a long-to-be-spoilt part of our suffering south coast.

Last year the critic, Edward D. Mills, was fierce and ended in hoping that the next year's critic would be able to sound a

more cheerful note. I can—just a little more cheerful, and that perhaps due to my cheerful disposition. The number of entries for the prizes may have dwindled over recent years (not surprising, as the real value of some of these prizes has dwindled), but I find many of the examples of students' designs more robust, more sensitive and more adventurous than much of the work built today and admired in the magazines. I find much which is even quite practical, potentially. (I say 'potentially' because a lot of the silly things could, with time and thought, easily be righted.)

What cheers me less is the progressive decline that so often follows. This is perhaps unkind tilting at the qualified section of the profession, but I am in good company. The critic of six years ago spoke alike, only more crisply, when he said, 'I often wonder when I look at students' work why this high standard is not maintained after they go into the jungle of private practice.' That critic was Basil Spence.

Why has this decline taken place so often, and how can you students resist it? Perhaps when battling with a live job for a live client, you are intimidated by the enormity of the responsibility and the weight of your professional dignity. I can only say, forget as far as you can professional dignity and concentrate seriously on architecture; be obsessed by it—as you often were as students. Don't be diverted by too many of the activities which lie on the fringes of architecture: by a few, maybe, to avoid ivory towerdom, but not by so many that you scarcely have the time to design. Be adventurous. Your practical misjudgements are often made when timidity gets the better of intuition and enthusiasm. Leave yourselves enough time and energy not only to select what is best from the past but also to think for yourselves, so that you produce your own work, not a paler version of others.

And now I had better get down to work and make my catalogue of many of the entries for most of the prizes. If what I say about some of the designs seems flippant and short, please forgive me. Time is short now—but I can tell you that on the juries time was not short. These many juries really worked and worried long and hard to arrive at their judgements.

I will take first the long list of prizes which do not involve drawings, and my remarks may sometimes be rather stodgy summaries of the juries' feelings. Then, those prizes which include drawings but which I cannot or will not illustrate with slides. Lastly, the meaty design prizes with accompanying slides for which you will be mercifully plunged into darkness which, like lettuces, has a soporific effect.

## The R.I.B.A. Public and Secondary Schools Prizes

Starting lugubriously with the R.I.B.A. Prizes for Public and Secondary Schools—one for an illustrated architectural essay, the other for drawings of an existing building—total prize value, 20 guineas. There were three entries, which were poor and the jury could make no award; last year thirteen, no award. This is sad. The conditions for these competitions seem good and they could stimulate interest in architecture in young people at schools. Perhaps, nowadays, the amount of money is not enough—perhaps there is not enough encouragement by the school authorities. What steps can be taken to stop these prizes petering out?

## The Art Schools and Technical Institutions Prize

The R.I.B.A. Prize for Art Schools and Technical Institutions with Facilities for the Instruction of Intending Architects is £10 in books. The award is based on portfolios of work submitted. There was only one entry (Mr. J. Varnom, of the Manchester Regional College of Art), but the officers of the Board of Architectural Education thought that the work reached a particularly high standard, so Mr. Varnom wins the prize. Despite the lack of competition, he can feel that his win is a proper one.

## The Silver Medal for an Essay

The R.I.B.A. Silver Medal (and £50) for the best essay on a subject of architectural interest is open to all members. The august jury would lend tone even to a Piccadilly Circus inquiry. Some of them, in fact, did. Four essays this year—last year, eleven. No award. The jury felt that the entries were disappointing—competitors did not seem to appreciate that an essay is a literary form; a written architectural thesis is no substitute. The most promising entry which, however, was not considered quite suitable for an award, from 'Leporello', was such a thesis—a useful and interesting piece of architectural research on Thomas Rickman and Henry Hutchinson, illustrated with good sketches and the author's own photographs.

## The Alfred Bosson Research Fellowship

The Alfred Bosson Research Fellowship for postgraduate research is open to all members. Eight applicants—the same number as last year. It was awarded to Mr. P. Manning. The jury recommended that in view of the evidence the winner should pay particular attention to the visual aspects of farm architecture. Also, they remarked on



the excellent evidence submitted by Mr. T. L. Marsden, but felt that his proposed research subject offered limited scope.

#### The Henry L. Florence Architectural Book Scholarship

The Henry L. Florence Architectural Book Scholarship—to encourage and support the writing of books which will be useful to the profession—had six entries. The jury felt that Professor Peter Collins of McGill University, Montreal, with the synopsis of his proposed book *Changing Ideals in Modern Architecture (1750–1950)* was an obvious winner. Professor Collins claims that previous histories of modern architecture, usually by art historians, are heavily concerned with stylistic development, placing architects and their works in neat historical niches. This history shows promise of debunking this slick arrangement and of worrying itself with the ideals and emotions of individual designers and groups of designers. It should be most welcome, and I only hope its style will not be as turgid and polysyllabic as you find in some of these histories but has nice short words for simple souls like me.

#### The Rose Shipman Studentship Trust

The Rose Shipman Studentship Trust is a big, fat prize—£600—and is briefly and broadly described as being for 'the study of architecture'. Ten entries this year, as against 17 last year.

The money is awarded for research involving travel—research being that elusive thing, 'original work', and not just the painstaking cataloguing of other people's work. With most of the entries the jury felt that there was too much emphasis on historical ferreting out, and not enough on forward-looking research, the publication of which could be of real value to architects.

The winner, Mr. R. Leacroft, proposes to study theatres in the U.S.A. and Canada and impressed the jury by giving clear evidence that he understands how to make an investigation and to advance knowledge of the subject. The theatre is threatened by the cinema and, more especially, television, which can pour a lot of money into their productions. A new attitude to the relationship of players and audiences in theatres, expressed, for example, by the 'Theatre in the Round' movement, is arising in many parts of the world from this challenge, and the effect on the design of new theatres is only just beginning to be felt. Mr. Leacroft's field of study is therefore, I think, most exciting.

The jury were also impressed with the proposals from Mr. G. D. Binckes from South Africa, who wanted to study landscape architecture in Great Britain, France, Italy and Holland. Interest in this subject is, he feels, somewhat limited in his country, where almost every building is dumped down on a beautiful but suffering landscape.

#### The Hunt Bursary

The Hunt Bursary—a certificate and £95 for the study of housing and town planning—attracted three entries this year, two last year.

Here, juries are generally confronted with huge, bulging portfolios with wads of drawings (mostly flashy, brightly-tinted zoning plans) which, I'm afraid, give me immediate indigestion. But juries are of tougher stuff and stagger bravely through these and the long accompanying treatises. The winner, Mr. D. A. L. Hanford, impressed them with his very worthy report on the coastal green belt in Hampshire. With his prize money, he proposes a 24½-day tour of Europe studying 'men and vehicles in housing areas' with such a ferocious itinerary that it should wear him out.

#### The Godwin and Wimperis Bursary

The Godwin and Wimperis Bursary—a silver medal and a big prize of £300—had only two entries. It is awarded on the best selection of practical working drawings and is open to members and students. Both the strength and the quality of the entries were more disappointing than in previous years and, sadly, no award was made.

#### The Archibald Dawnay Scholarship Trust Prizes

The prizes from the Archibald Dawnay Scholarship Trust are awarded to students in recognised schools of architecture on the evidence of selected working drawings, and are intended to foster, in the words of the R.I.B.A. 'blurb': (1) the advanced study of all forms of construction, not necessarily steelwork and reinforced concrete; (2) the economic, skilful and practical use of materials; (3) work in which the main structural elements shall find their logical expressions in the architectural design.

There were 21 entries, as against 15 last year, and four prizes of £100 each were awarded.

In general, I was most impressed by the technical ability shown in many of the drawings (more so perhaps than were some of the fierce teachers on the jury). I was less impressed by the lack of sensitivity in the detail—I find it boring to see hideous objects impeccably worked out. I was horrified (more so perhaps than some of the jury) at the huge waste of energy revealed in many of the drawings. Working drawings are a means to an end—they are for a builder to work from, not for wall decoration in the Henry Florence Hall. Embedded heating coils, tidily creeping their inky way all over a floor plan look impressive enough but are a dangerous waste of time. The drawings try to impress too much, but it does not impress me when someone writes beautifully, largely and laboriously across one drawing, 'One inch represents four feet'. (Another writes, 'One inch *reps* four feet'.) A fiddling point, perhaps, but an example of last things first.

No single entry deeply impressed the jury. I will deal briefly with the four winners of the awards. The drawings of Mr. A. J. Wheeler from the Birmingham School of Architecture were quite good, but fit in with what I have just said. Beautiful drawings of a central youth headquarters—too beautiful. Technical skill,

great energy, keenness and pretentious time-wasting. I, personally, was much more taken with his less flamboyant set of details of a sailing club.

Mr. R. L. Alexander of Edinburgh put in a set of drawings for 'Tourist Board Offices'—a good technical study of an uninspiring building, but too much information and wasted energy for proper working details. From these drawings, it would be fine if this student could set about preparing a set for the builder, giving the information required but with not one wasted line or unnecessary piece of information. It might then be a fine set.

The cricket pavilion of Mr. W. E. Bakewell of Aberdeen is a clearer set of working drawings with, for once, a straightforward and logical system of dimensioning; but the resulting building is a little insensitive and uninspired.

The hotel by Miss Evans of the A.A. is different from the others, with more glaring merits and faults. This award was made by the jury in spite of the size of the scheme tackled, not because of it. It was, we all felt, far too big and this applied, to a lesser degree, to most of the other entries. I think this is largely the fault of the schools (and the R.I.B.A. testimonies). I have the impression that they pay lip-service to the virtues of spending a term producing really complete drawings of, say, a potting shed but become more grandiose at the last moment.

In Miss Evans's scheme, we were all most impressed by the sensitive detailing—the care put into making something work and look well. But the information on the drawings is sometimes strange and haphazard—important elements are not shown or described, while incidental items are picked on and quaintly labelled—for example, 'Grass reinforced at openings with concrete paving slabs', whatever that may mean.

If the sensitivity of this set of drawings had been combined with the straightforward clarity of the previous set from Aberdeen, we would have had a fine set of working drawings.

#### The Grissell Gold Medal

The Grissell Gold Medal and the sum of £35 is a similar type of competition but for big, grown-up architects. To be eligible, in the words of Peter Shephard, the critic two years ago, 'you have to be past the final but not have been in practice for more than ten years. This must be as principal, or as head of a government or municipal architectural department (which I presume leaves the Deputy Chief Architect of the London County Council another ten years after his promotion to chief! But I suppose anybody who has been building garages for ten years for his aunts will be disqualified!'

There were five entries. Generally, the drawings share the students' fault of being far too laboured, but with less excuse. After all, it is very easy to tell students that drawings are a means to an end but, as a student, you seldom have the chance to reach the end—to have built what you have drawn. It is then at least under-

standable if the drawings are treated as an end in themselves.

The winning set of drawings, by 'Caesar' (Mr. J. H. Williams, trained at the Birmingham School of Architecture) was much the best—a car show-room and filling station: a stimulating building (especially its roof) delicately detailed, well worked out and clearly drawn.

The runner-up, a 'Factory for a New Town', by 'Berwyn', was quite a good scheme and set of drawings, but the jury felt that too much came out of the textbook.

I now come to the prizes which, for a nice change, can be dealt with in the dark, as there are a few lantern slides to cheer things up.

### The Pugin Studentship

The Pugin Studentship—a silver medal and £80—is open to students or members between the ages of 18 and 25 for measured drawings of a medieval building. The drawings of the subject chosen should be a real addition to existing records. Explanatory sketches accompanying the measured drawings are encouraged. There were four entries. The fine tradition of drawing associated with this prize is happily continued this year. It is rather a wooden entry—literally—medieval timber construction being the thing. (I heard it rumoured that, at the A.A., stony romanesque is now favoured, but neither the A.A. nor the romanesque has shown its face here.)

The jury thought that the drawings of West Bromwich Manor by Mr. J. A. Stafford (from the Birmingham School of Architecture) were by far the best. I go further than that: I think this is the outstanding entry of all this year's competitions. A Gothic, timber, barn-like structure was chosen and clearly described—beautiful, sensitive pencil drawings with really superb site sketches. At first, it was hard to take some of the jointing details seriously; you would have to dismantle the building to discover them. This is just about what did happen, as explained on one of the drawings—thus: 'Restoration of this recent discovery provided a unique opportunity for research into medieval jointing technique.' Altogether a beautiful and worth-while achievement. His pictorial site notes of Lichfield Cathedral Chapter House were good, but an anti-climax after West Bromwich Manor.

### The Owen Jones Studentship

The Owen Jones Studentship, a certificate and £250, is for the 'improvement and cultivation of knowledge of the successful application of colour as a means of architectural expression.' Colour in buildings, if you prefer a less clogging mouthful. It is open to students or members over the age of 21. There were four entries (last year four also and the previous year three). It is disappointing that this prize draws so few competitors, but this year, though few, the entries were attractive and stimulating.

The clear winner, Mr. D. A. Rock (once of Newcastle), had the pseudonym of

'Serendipity' which the jury found difficult to pronounce but which, of course, they and I immediately knew was a word coined by Horace Walpole in January 1754, from the Arabian 'Serendip', meaning 'Ceylon' and meaning the faculty of finding interesting or valuable things by chance or where one least expects them. The pictures are generally delightful, marred only by an occasional attempt at humour—for example, a poorly drawn orange cherub on a blue po—which in architectural drawings is difficult to get away with, unless you are Osbert Lancaster. I admire very much the sketch of Modena Cathedral in Italy, with its subtly blotchy stonework and the landscape of a pre-Raphaelite green with Ophelia supplanted by the Austrian onion-domed centre-piece. 'Serendipity's' own design, for an artists' club in a village, is attractive but a little overworked. The danger to him is that he can draw and colour so beautifully that almost anything looks splendid. His buildings, in the flesh, will find it difficult to live up to their creator's rendering of them.

The pictures are cleverly related by simple cross-reference to the precepts in Owen Jones's *Grammar of Ornament*. I wonder if Owen Jones, who died in 1874, and the Misses Jones who forked out the money for this prize realised the packet they would stop by asking candidates to include critical notes on this *Grammar of Ornament*.

### The Tite Prize

The Tite Prize alternates with the Intermediate Design Prize. It is the Tite's turn this time. An intermediate prize with a certificate and £100, it is a design exercise in the Italian Renaissance manner—this year an open-air theatre in the palace grounds of a 15th-, 16th- or 17th-century Italian nobleman.

I, personally, would find this competition difficult to do, and I find it difficult to criticise. Perhaps you must become a mental transvestist to put yourself into the costume of this contest—though I don't mean that derogatively. In these days, when this modern style is taken so much for granted, you might guess that the Intermediate Design Prize would bag all the entries, leaving the Tite in the following year with none—and you would be wrong. This year has the whacking great Tite entry of 108, as against 101 two years ago. It is a two-stage competition; the esquisse knocked out 99, leaving nine for the final stage.

Generally, the results were a little disappointing. The 750 seats asked for make only a flea-pit auditorium. Most of the entries were out of scale and too pompous—the French Empire's idea of the Italian Renaissance rather than the Italian Renaissance's idea of it. The acoustics in most of the designs would be poor, a fault seldom found among classical theatres. It was, I think, a well-set programme, although the requirement that a screen wall or colonnade at the rear of the seating should be provided, reasonable in itself, seems too often to have been treated as an

excuse to invent a grandiose concoction out of scale with the rest of the design and its surroundings. The jury were fairly fierce about the general standard of the draughtsmanship. I myself was impressed by it—perhaps because I draw badly myself.

The scheme by 'Queue' (Mr. J. H. Hutchinson from Hull School) was unanimously agreed the best. It is well worked out and finely drawn, but seems to me Napoleonically puffed up, especially when seen against the charming and charmingly drawn tower sitting quietly and timidly behind it. The junction between the stage and the grandiose screening colonnades is rather feeble and I think that the open arch behind the centre of the stage would be a bit uncomfy for an actor who would probably not appreciate the garden vista behind his back.

'Leoni' (Mr. D. D. Telfer from Newcastle) had an Honourable Mention. His is a pleasant design, nicely drawn, belonging to an earlier and simpler century than most of the others. The entrances, especially that for the posh people, are a bit awkward, and the acoustics, with an open colonnade behind the players would, I think be a bit mouldy.

'Deja' had what I thought was the best esquisse, a very simple and charming scheme, in scale with the requirements and with my idea of the surroundings. Unfortunately, the final version was badly worked out and badly drawn—here was what Aldous Huxley calls the 'inverted alchemy' of turning gold into lead.

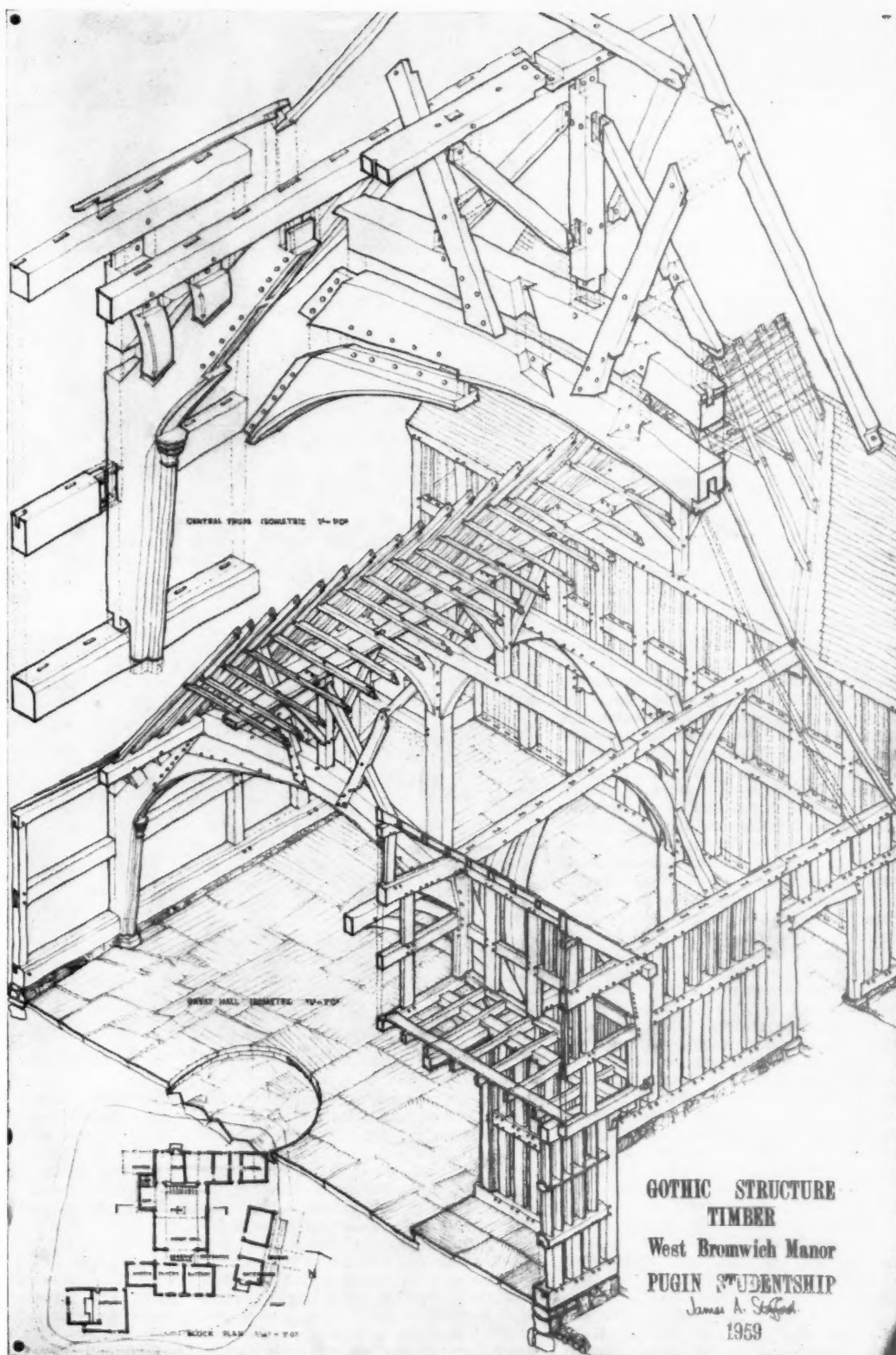
Even if I have passed over some students with short, derogatory remarks, or damned with faint praise, I still remember that they had the spirit and energy to work away at this highly skilled contest and reach the last nine out of over 100 entries, and that is a real achievement.

### The Soane Medallion

Now, last and most, I come to the Soane Medallion, the top design prize of the year, other than the Rome. It is open to those who have passed their R.I.B.A. finals. The prize is a medallion and £120, for touring abroad and making measured drawings and sketches. There were 142 entries (about the same as in recent years). It is a two-stage competition. Nine were chosen to tackle the second and final stage.

The subject was a residential yacht club on the south coast, together with a caravan park and a motel in chalet form. A very well-chosen subject of a gruesomely philistine kind. I do not accuse the eminent and fearfully progressive jury of being philistines. I think the subject is only too probable and realistic and is a challenge to competitors to think up something which, while answering the client's requirements, will not fall into the trap of ruining yet another piece of coastline with its bloody chalets and caravans—a challenge which, I'm afraid, nearly every entry has failed to meet.

The quality of the final designs is not at all bad—though my impression is that the



Pugin Studentship:  
One sheet of the  
winning set of  
drawings submitted  
by Mr. James A.  
Stafford

**GOthic STRUCTURE  
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**West Bromwich Manor**  
**PUGIN STUDENTSHIP**  
*James A. Stafford*  
1959



standard of last year's Intermediate Prize was a little higher. This is not unusual; the Intermediate phase is more often a peak in one's architectural career than the Soane Medallion. Nevertheless, several of these Soane schemes, if built, would be greatly admired and, if judged on the comparative method, rightly so.

In the nine schemes, I found a refreshing diversity of treatment, although slick streamlining poisons three or four of them. It is noticeable, and I think welcome, that colour is used with more restraint than in the polychromy-equals-joy days, when buildings were made apparently of assorted flavours of reinforced poster-colour.

Although black, white and violent shades of grey are now quite the thing and fancy furnishing shops proudly claim black and white to be *House and Garden* colours, most competitors have exercised the further restraint of not sticking to monochrome.

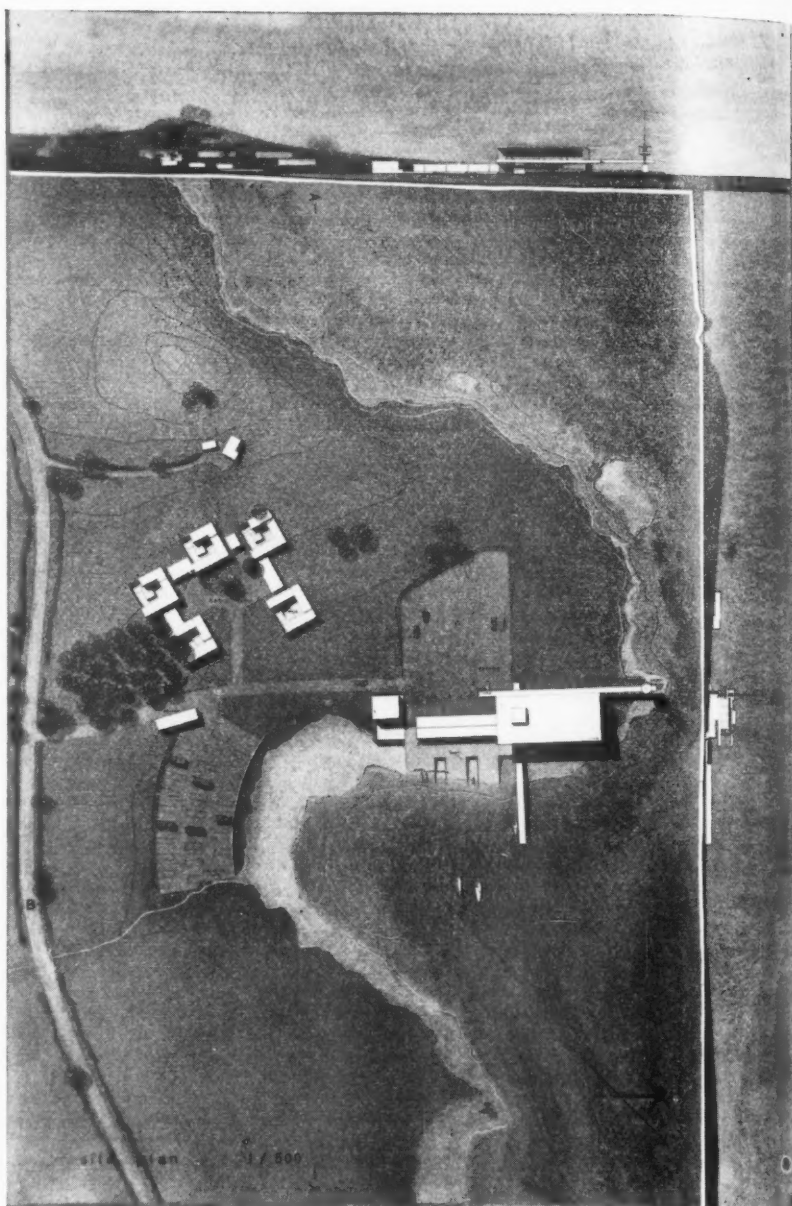
'Bounty's' scheme (that is Mr. R. N. Allsopp's, from Leicester) was agreed the best, but only after some hesitation from worried-looking jurors. The building is pleasantly placed overlooking the bay and not straight out to sea. The blocks forming the motel are charming and cleverly worked out, but are too pimply on a fine landscape. They could so easily and naturally have been burrowed into the sloping ground and camouflaged, so that their petty scale did not jar with the main building and with the landscape. The caravan park is trite and nasty. The main building is pleasant enough looking—straightforward, not too ponderous and is original and personal in a quiet sort of way. The designer is at his best in the handling of the outlying wings, like the tarred diagonal-boarded doors to the boat-house. The curved edge of the top of the building is a puzzling but harmless piece of styling but is a primmer version of the original design where it was handled more robustly and with more conviction. Materials are generally used well, but why introduce heavily tailored stonework as well as the rugged old stuff? This fidgeting around from material to material so often brings about the dullness it seeks to avoid.

The handling of the inside is straightforward, but not stodgy, and the planning is a lot less silly than in most of the other schemes.

I am told by someone who knows that there are important requirements for the putting out of flags and the working of starting guns. I do not understand these, nor does this competitor and nor do most of the others. Being ignorant of these requirements is all right for the preliminary sketch, but it is surprising that so few have since bothered to find out about these esoteric devices. They might easily influence the design.

'Tonka's' promising sketch scheme has unfortunately developed an air of slickness in the final working out. The motel arrangement is borough engineer's bungaloïd.

'Djongo's' is a disappointment again, after his sketch scheme with its fresh, slightly naive quality. In working out his



Soane Medallion: The winning design by Mr. Robert N. Allsopp

design, he has made an attempt to avoid the pitfalls of plagiarism and cliché, but the process of intellectual grindings has led to something which looks rather like any old timber huts, even if they are subtly worked out and well sited.

'Able's' sketch scheme was, I think, the most promising of the lot—a most vigorous and thoughtful design. The final version has changed. The delicacy of the sketch is replaced by a cheerful heaviness—reminiscent of the Rue Mallet-Stevens of the 20's or of something to be dumped on a plot in Rotterdam. It does not seem to me suitable for the site, even if some parts of

the building are exciting and beautiful. The caretaker's cottage goes very badly with the main building, but he has coped better than anyone else with the layout of the motel group.

'Shilly's' sketch scheme had a pleasant rough-and-ready boat-yard atmosphere, some of which has been lost in the later refinements. But he is obviously a sensitive designer and good planner, even if he has worked in too many tricks. The jury and I thank him for the trouble he took in showing clearly the materials he used in making up his buildings.

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names of materials on a drawing is a form of indecent exposure. 'Shilly' confined his indecent exposure to the caravan layout.

'Chippy's' main building is pleasing and kind to the site. We all felt it would look better without its tower, which is out of scale, unnecessary and, internally, badly arranged. I find the brown vertical weatherboarding rather an insipid alternative on this sea-site to tarred boarding done in the old-fashioned horizontal way.

'Rab's' building has a light, cheerful look and has the right touch for the site. The drawings are sensitive too, but not explicit—walls built of the unknown with small, stately pleasure-domes of mysterious construction thrown in. The internal planning is rather poor, especially the canteen and bar on different floors, served by a double-height kitchen—a new dodge in open planning.

The design by 'Nor' looks impressive at first sight, but seems to me too streamlined, slick and out of scale with the surroundings. The main lounge has magnificent views over the car park. The drawings are very competent and clear.

Finally, one of the most interesting designs—that by 'Malad'. It has broken one of the rules, because the final design isn't remotely like the original sketch. (But, even if this rule had not been broken, 'Bounty's' scheme would still have won.) For once, this final design is a great improvement on the sketch. It is reminiscent of Chandigarh but, strangely enough, seems to suit this site. The exterior is a good example of a robust, dominating framework allowing haphazard infilling panels to be cheerfully stuffed into it, but the motels and other outworks are horribly out of scale with the main building.

The drawings are clear and rather lovely, in spite of the parsnip-headed beings peopling them.

And that's the lot.

I hope next year's critic has an even more stimulating bunch of entries than I have had this time—and a bigger bunch—and I hope he learns as much from his horrible experience as I have.

I would like to congratulate the prize-winners and all who entered the competitions and to thank the juries, Mr. Haynes and his staff, the audience and the platform. As the South Croydon child said to her Aunt Enid, 'Thank you for all the trouble I've been.'

[Critical comments on the work submitted by: Mr. J. R. Woolmer, Mr. N. R. Foster, Mr. P. B. Lockwood, Jonty, Perseverando, Mint, Borgia, Tec, Zeus, Titan, Nero, and Bellerophon have been omitted from this report but are available to the competitors concerned on request.—Editor.]

## VOTE OF THANKS

**The President:** Thank you very much, Mr. Powell. Now it is my pleasure to call upon Sir Hugh Casson to move a vote of thanks to Mr. Powell for his review.

**Sir Hugh Casson, M.A., R.D.I. [F]:** It is my pleasure and privilege tonight to pass on your behalf a vote of thanks to Mr. Powell, and through him to his colleagues, for their admirable and painstaking work in judging and criticising the students' prizes.

Now I do not think it is such a terrible chore as he leads us to believe, for all architects are tuptophilists at heart. For those who are unfamiliar with Greek, which means everyone in this room except me, *tupto* means 'I strike' or 'hit out' and *phile* 'I like'. The poem which I quote is Hilaire Belloc's: 'Oh do not strike the porcupine, unhappy child, desist: Alas, that any child of mine should turn tuptophilist'.

We are all tuptophilists, although when we are tuptophilising we run into trouble. For those of you who remember a recent inquiry at which our architectural critics were subjected to some personal inquisition by our distinguished Counsel, I gathered the feeling that being an architectural critic was almost as criminal an offence or as despicable as shipping ancient horses from Ireland or not having a crumby aesthetic. This Counsel tried to prove that because Mr. Richards and Mr. Jordan no longer practised as architects, their opinions were worthless. I have often wondered since whether he thought because Sir Kenneth Clark's paintings do not regularly appear at the Whitechapel Art Gallery his views on art history are equally worthless. Let us not pursue that. I only mention it to remind the distinguished Counsel that in listening to Mr. Powell we have listened tonight not only to a very perceptive critic with an independent mind, an alert eye, a witty tongue, and a rate of words per minute I have never heard equalled anywhere, and of course, a practising architect and one of the most famous competition winners of the past twenty years.

Mr. Powell described his experience as most horrible. I do not think we need spare any tears for him: he is a natural extrovert, and I do not think he minded more than most of us the experience of giving advice to younger men—after all, we get enough of it back—or wallowing publicly in architectural criticism. Nevertheless, pleasurable in some ways as such an experience can be, it does involve a lot of genuine hard work, for which we should all be most grateful.

Mr. Powell referred to two things which have continued to puzzle the critics for some years: first, the still rather meagre number of people who bother to enter. It is quite staggering the number of people who do not seem to want six hundred pounds or a holiday in Greece. Secondly, what he described as the decline in talent which seems to set in when students reach the jungle of private practice.

I find the former, reluctance to enter, or lack of self-confidence, is perhaps more disturbing than the latter, because I do not really believe in the latter. I do not think great talent abounds in great amount at any time, why should it? It never has done, and designing well is very difficult, at whatever age you are trying to do it. Mr. Powell's

sharp eye has discerned the same old faults which affect us, I think, just as much in our later years as they do as students. I have listed some of them here: superb drawing failing to disguise superficial thought, routine cataloguing masquerading as scholarship, working drawings designed less to provide information for the contractor than occupational therapy for the author, a tendency to think of buildings in the flat, not enough attention given to corners and junctions, on their own, i.e. not enough attention to treatment of landscape and surroundings and grading, and in the dark, not enough thought given to natural and artificial lighting. There is no harm in a certain amount of bluff: all professional people depend upon it for their livelihood, but when you start bluffing yourself, it is dangerous.

To all these faults we should add, I think, what is that most British of all faults, the refusal to face facts. I was listening in London the other day to Lord Boothby. He remarked that when the European nations faced a political crisis, it was interesting to observe the different nations' reaction to it. The Germans send for a leader; the French sit down and draft a new constitution; the British look the other way in the hope that it will blow over. I sometimes feel we as architects always combine all these disastrous solutions. We signal always for a leader, usually some magazine, a Corbusier or a Mies, we sit down and draft some terrible manifesto proclaiming our beliefs in something or other. Most commonly of all, I think, we sit down and go on drawing some hopeless solution in the hope that something beginning with poly- or called mastic will keep the weather out of what we want to do.

Mr. President, ladies and gentlemen, could I just finish by congratulating the winners of the prizes, by sympathising with all those who had the enterprise to enter for them but who were unlucky in not getting rewarded, and by thanking Mr. Powell (which is what I am really here to do) and his colleagues for all the very hard, sincere and faithful work they put into judging and criticising all the projects.

**The President:** I would now like to call on Mr. Anthony Part, who is the Under-Secretary of the Ministry of Education, to second the vote of thanks to Mr. Powell.

**Mr. Anthony A. Part, C.B., M.B.E.:** I reckon Sir Hugh Casson has just about thought-ed it out; you see the advantage of a classical education. I am just a client, but I have spent the last thirteen years or so working rather closely with architects in various contexts, and I hope perhaps that aura of distinction which surrounds architects has rubbed off on me.

The job of the critic on these occasions is very hard, almost as hard as that of proposing the Toast of The Guests. I do think Mr. Powell deserves our considerable gratitude. There are, as you know, two ways of seconding a vote of thanks, which always should be short. One is to say 'Thank you' and the other 'Thank you very

much'. There is no doubt Mr. Powell deserves 'Thank you very much'. He was very stimulating, very witty: I must say I could not help being very interested in some of the more marginal things that cropped up during his address.

I am fascinated by what this student is going to do in his 24½th day, whether it comes at the end, or run in with a half-day to start with.

I hope it is not too impertinent to say it would be very interesting if the designer of the winning entry for the motel could have the opportunity of visiting the United States.

Coming back to the critic, the chief thing about him that struck me was that he was so obviously an interesting person, and this is what matters to him as much in architecture as any other quality an architect can have. This is nothing that education can do anything about, but it can do something to foster it.

At the ministry, one of the things which is interesting us most at the moment is the question of the partnership between the different people who collaborate in designing and building a building. This partnership, I think everyone will agree, is not nearly close enough at the moment. We want to try and do all we can in education to help the partnership to grow closer, to help the architect to qualify himself to be in most cases the leader of the team, and not just regarded as an expert in what the engineers would call appearance-design.

Of course, one of the difficulties is that architects tend to be judged by laymen largely on the appearance of a building from the outside. My architect friends tell me nowadays the thing to do is to design the building from the inside outwards. This is all very well, and I pay a well-deserved tribute to the very close co-operation between the client and the architect which is implicit in this approach, and to my mind is one of the great distinctions of architecture as it is today; but it is of course essential, if you follow this method, that at some stage you should reach the outside. Quite a few architects do not seem to have got that far.

So one way or another, I think there is some work to be done on the outside appearance of buildings, because this is the weakest part of modern architecture, and it is causing the architect not to be in such high regard among laymen of the outside world, as he might otherwise be. Above all, it seems essential he should have a sympathetic interest in his partner in the building industry, and should not be ashamed to learn even about foundations.

**The President:** Thank you very much, Mr. Part.

Now I have much pleasure in putting the vote of thanks to the meeting.

The vote of thanks was carried by acclamation.

**The President** presented the Medals and Prizes, and the meeting then terminated.

## Reconstitution of the Board of Architectural Education

THE COUNCIL have agreed that the existing Board of Architectural Education should become the Advisory Council on Architectural Education.<sup>1</sup> It is also agreed that a new Board consisting of 12-15 members should be formed: this Board will be appointed by and will report direct to the Council.

The Council have asked the present Board of Architectural Education for recommendations as to the manner in which this new Board will be constituted. The Board have considered this matter and recommend:

1. That the Advisory Council on Architectural Education should have a membership similar to that of the present Board, the Chairman and Vice-Chairman of the new Board acting as Chairman and Vice-Chairman of the Advisory Council; that the Advisory Council should be appointed as at present annually by the Council on the advice of the new Board, and should report to the Council as necessary. The Advisory Council should be empowered to appoint committees as may be necessary from time to time.

2. It is clearly necessary that all members of the new Board should be *ex officio* members of the Advisory Council on Architectural Education.

3. The new Board would have to include in its membership the President of the R.I.B.A. (*ex officio*, in compliance with Bye-law 49), and a Visiting Board. The members of this Visiting Board should be:

The Chairman of the Board  
The Vice-Chairman of the Board  
The Honorary Secretary of the Board  
The Chairman of the Schools Committee  
One other Recognised School's Head  
Four ordinary members (two in private practice and two official architects)  
A representative of the Ministry of Education  
A representative of the Scottish Education Department.

4. This would provide 12 of the 12-15 members proposed by the Council. Since the whole intention of the reconstitution of the Board is to provide a small body of members who would be closely in touch with all aspects of architectural education, it is important to see that various interests are covered by the remaining members of the new Board. It is considered that these members should be appointed for their special knowledge of some aspects of the

work of the Board, and it is proposed that these special interests should be:

- (i) Education up to the level of entry into the profession: a suitable representative might be, for instance, a teacher in a secondary or public school.

- (ii) Different interests within architectural education; it is possible that developments in architectural education might benefit from experience in:

- (a) schools of art
- (b) universities
- (c) technical colleges
- (d) the Allied Societies and their educational work over part-time release etc. This is particularly important from the point of view of sandwich courses.

It seems reasonable to have four individuals representing some aspects of architectural education associated with these four categories. The consideration of developing a category of technologists gives special importance to one of these appointments.

- (iii) Post-graduate studies: it is highly desirable to have someone with expert knowledge of this field of work.

5. The Visiting Board, with representatives of the interests described above would bring up the total membership of the new Board to eighteen.

6. The Board would hold monthly meetings.

7. It might be a good opportunity to review the work of committees, and it is suggested that the Schools Committee should be kept in being as it is. This would allow a further direct liaison between the new Board and the Schools. Other Committees, such as the Prizes and Scholarships Committee and the Examinations Committee would be abolished. The new Board would appoint committees as necessary to deal with special matters relating to examinations and prizes.

8. The Advisory Council, which would meet quarterly, would consider reports from the Board and general points of policy. It could also initiate consideration of and make suggestions regarding any questions of architectural education. For an experimental period of one year eight members will constitute a quorum.



<sup>1</sup> Recommendation of the Committee on the Oxford Architectural Education Conference.

# Review of R.I.B.A. Examination Fees

AT THE ANNUAL GENERAL MEETING on 5 May 1959 an undertaking was given to review examination fees, in the light of the apparent profit of £19,563 on examinations shown in the Annual Accounts for 1958. Two fundamental questions have now been examined in detail:

A. What level of profit does the Institute in fact make on examinations, and how does it compare in this respect with other professional institutions?

B. Are the amounts paid as fees by R.I.B.A. Probationers and Students excessive by comparison with other institutions?

Following exhaustive consideration by the Finance and House Committee in the light of (a) the answers to these questions, which showed that the amounts paid in examination and other fees are not excessive by comparison with other institutions, and (b) the likelihood of a future decline in income from the R.I.B.A. examination fees with the higher standard of entry, with no corresponding reduction in expenses, the Council decided at their meeting on 8 March 1960 to make no alteration in the level of examination fees, exemption fees or the Probationers' enrolment fee. They decided that the latter, which is in fact an entrance fee to the Probationer class, should be credited to 'Entrance Fees' in the accounts.

## A. Does the Institute make a profit on examinations?

### (i) Expenditure on examinations

The sum shown in the accounts for 1958 as expenditure on 'Examinations and Prizes' was £5,831. This covered only the direct expenses incurred in holding the R.I.B.A. Intermediate, Final and Special Final examinations, including fees and expenses for examiners and invigilators, the cost of overseas examinations (including papers), expenses of the R.I.B.A. Visiting Board, and the cost of medals and prizes.

It did not include any items for salaries of the staff of the Board of Architectural Education (most of whose time is spent on examination matters); postage, stationery, telephones and other administrative services shared with the rest of the Institute; rent of that portion of the premises occupied by the Board staff, or for the use of rooms in the building for examinations; travelling expenses of members of the Board and Committees (other than the Visiting Board).

The expenditure figure shown in the accounts is therefore highly misleading. Without a proper system of cost accounting it is impossible to arrive at a true figure, but the following is an estimate of the total expenditure on Examinations and Education in 1958:

Board Staff (salaries, pension provision, national insurance)	£ 7,360
Accommodation (note 1)	543
Share of central services (note 2)	1,370
Examiners and Invigilators	2,834
Overseas Examinations	196
General Examination expenses	2,055
Medals and Prizes	603
Visiting Board	143
Staff and Committee members' travelling expenses	465
	<hr/>
	£15,569

Note 1. Proportion of entire R.I.B.A. building occupied by Board staff (one twenty-sixth) applied to total of rent, rates, heat, light, cleaning, etc.

Note 2. Staff teas, etc., £117. Postage (at ¼ of total), £853. Stationery, estimated figure, £250. Office equipment on 14-year amortization, £150. Total: £1,370.

It can be argued that the whole of this sum of, say, £15,600 should be set against income from examination or exemption

fees, since none of the Board's wider activities in the educational field can be divorced from its statutory responsibility for examinations. If, however, these wider activities are considered instead to be part of the Institute's general responsibilities and therefore a charge on members generally, then it is estimated that about one-third of the time of the Board's staff is engaged on them, leaving two-thirds spent on examinations. On this basis, taking a proportionate share of salaries and accommodation, expenditure would total £13,000 approximately.

There are thus three expenditure figures:

- £5,831—direct expenses only, as shown in the accounts
- £15,600—estimate of full expenses of the Board
- £13,000—estimate of true expenses attributable to exams.

The Institute is not alone in showing a misleading picture of expenditure. The R.I.C.S., the Institution of Structural Engineers, the Chartered Auctioneers' and Estate Agents' Institute and even the Institute of Chartered Accountants (who might be expected to do better) show only a partial expenditure figure, because their practice, like ours, is not to allocate the cost of salaries, overheads etc. to individual activities. The Institution of Civil Engineers charge all items of expenditure including salaries etc. to a separate examinations account, and aim to show only a small profit. The Institution of Mechanical Engineers and the Law Society each have a separate account covering a wider field. The I.M.E. have an Examination and Educational Development Account, which showed a small loss after charging expenses of educational meetings. The Law Society have an Articled Clerks (Legal Education) Account which includes the running of the School of Law. They make a profit on examination fees in relation to expenses, but are required by statute to apply the profits to Legal Education.

### (ii) Income from examination fees

The Annual Accounts give a misleading picture here also. The sum of £25,394 shown as income from 'examinations and other fees' in 1958 included the following items of income:

(a) Probationers' enrolment fees	£6,505	(£6 6s. a head)
(b) Intermediate exemption fees (from students of a Recognised School)	£4,500	(£9 9s. a head)
(c) Final exemption fees	£1,900	(mainly £5 5s. a head)

### (a) Probationers' enrolment fee

No R.I.B.A. examination is involved. The candidate has merely to show that he holds the required examination passes. The fee of £6 6s. which he pays is in fact an entrance fee to the Probationer class, and should properly be attributed to the item 'Entrance Fees' in the accounts. The Council decided that this be done forthwith.

### (b) Intermediate exemption fee (£9 9s.)

This is paid by a student who has passed his Intermediate examination at a Recognised School when he applies for election as a Student of the R.I.B.A.

### (c) Final exemption fee

The Student who has paid a Recognised School Examination Fee (normally £5 5s.) is charged £5 5s.; where no school examination fee is charged, the exemption fee is £10 10s. All Students, whether taking the R.I.B.A. Final or a Recognised School Final, thus pay about the same in examination or exemption fees. The exemption fee does not cover entry into the Associate class, which is a separate fee of £5 5s.

Exemption fees received from students of Recognised Schools do not involve the Institute in a corresponding level of expenditure. The R.I.B.A.'s responsibility in relation to the Schools



involves only the expenses of the Visiting Board, the review of work of the highest and lowest pass of students and the administration of Prizes applicable only to students of the Recognised Schools, together with clerical records.

If item (a) above is transferred to 'Entrance Fees', the following picture emerges of income and expenditure from examinations:

	Income	Expenditure	Profit
(1) 1958 Accounts as published	£25,394	£5,831	£19,563
(2) 1958 income adjusted for Probationers' fees/Full costs of Board .. ..	£18,889	£15,600	£3,289
(3) 1958 Accounts adjusted for Probationers' fees/Exam. costs of Board only ..	£18,889	£12,900	+£6,000

Thus the apparently large profit on examinations is drastically reduced as soon as entrance fees are correctly allocated and the proper costs of the Board are charged. The profit that is left arises mainly from the income from exemption fees.

The 'profit' for 1959 will be substantially reduced as a consequence of the expenditure of £1,400 on examination desks, and reduced slightly in subsequent years by the cost of storing these desks.

The proportion of the R.I.B.A.'s total income (as shown in the Annual Accounts) derived from examination fees and entrance fees has been compared with that of other institutions. In making this comparison, it is fair to point out that the R.I.B.A. actually examines a substantially smaller proportion of candidates than do other bodies. The proportion of income received by the R.I.B.A. in 1958 from examination fees was by no means the highest (R.I.B.A.—11.8 per cent; I.S.E.—14.4 per cent; Law Society—16 per cent; R.I.C.S.—19 per cent), while the proportion from entrance fees was among the lowest (R.I.B.A.—2 per cent; I.C.E.—6.2 per cent; I.S.E.—6.9 per cent). If the two are added together, the R.I.B.A. receives about the smallest proportion of its income from these sources:

R.I.B.A.	13.8 per cent
Chartered Auctioneers	14.6 per cent
I.C.E.	15.4 per cent
Law Society	(18.6) per cent
R.I.C.S.	19.3 per cent (exam. fees only)
I.S.E.	21.3 per cent

## B. Are the amounts paid as examination/exemption/entrance fees by Probationers and Students excessive by comparison with other institutions?

Comparison has also been made for a number of institutions of the fees payable at various stages of professional training comparable broadly with those for architectural training.

**Probationers' enrolment fee (£6 6s.).** This is high compared with other institutions, who charge only a small entrance fee, if any, and a small fee for exemption from their preliminary examination. However, most of them charge an annual subscription at this stage—R.I.C.S.: £2 2s., I.C.E.: £2, I.S.E.: £1, etc., whereas the R.I.B.A. do not. The total amount paid over the period of R.I.B.A. 'Probationership' is thus not excessive.

**Intermediate examination/exemption fee (£9 9s.).** The examination fee is on a comparable level with that charged by other institutions. The exemption fee is high by comparison. Most other institutions make only a nominal charge of about £1 for exemption from their Intermediate or Final examination. However, none of them is in the same position as the R.I.B.A. with its Recognised Schools. The Board of Architectural Education is responsible for the standards maintained at the Recognised Schools. Other institutions give exemption mainly to university graduates, for whose course of training they have no responsibility. It is thought that the Recognised Schools charge only a nominal or nil fee for their Intermediate examination; students at universities pay high

examination fees.<sup>1</sup> Furthermore, some institutions charge an entrance fee to graduates, whereas the R.I.B.A. have no entrance fee for Students; and the annual subscription paid at this stage is generally higher than the R.I.B.A.'s Student subscription.

**Final examination fee (£10 10s./£5 5s. or £10 10s. exemption fee).** The examination fee is broadly in line with other institutions. The exemption fee is higher but the same arguments apply as for the Inter exemption fee.

**Entrance fee as Associate (£5 5s.).** This is not out of line with other institutions.

It may be helpful to compare what has been paid in entrance/examination/exemption fees and annual subscriptions through the period from the start of training to professional qualification. The table below attempts to do this (no accuracy is claimed for this, as our knowledge of the other institutions is far from complete).

	Students who sit the full Institution's examinations	Students who claim exemption	
		at Intermediate stage	at Final stage
R.I.B.A. .. ..	£37 16s.	£37 16s.	£32 11s. or £37 16s.
R.I.C.S. .. ..	£36 15s.	£27 16s.	£11 11s.
Chartered Auctioneers and Estate Agents Inst. ..	£30 19s. 6d. (excluding entrance fees)	£13 13s. (excluding entrance fees)	No exemption
Institution of Civil Engineers ..	£43 16s.	£41 9s.	£22 5s.
Institution of Structural Engineers ..	£27 12s.	£25 10s.	£12
Institution of Mechanical Engineers ..	£34 12s.	£19 11s.	£6 1s.
Law Society ..	£46	£35	No exemption

Estimated amount paid from start of training to qualification, in fees and subscriptions (excluding examination fees of the Recognised School or University)

This shows a surprisingly uniform result for students sitting the examinations of the various institutions. For those claiming exemption, the R.I.B.A. collects more than other institutions apart from the I.C.E. (Inter stage only), but only slightly more than the Law Society.

## Summary

The following is a summary of the main points that emerged from this investigation:

- (1) The Institute does not make more than a small profit on examinations if (a) the expenses of these are properly costed, and (b) Probationers' registration fees are properly allocated to 'Entrance Fees'.
- (2) The proportion of income which is derived from examinations and entrance fees is lower than that received by other institutions examined.
- (3) The amounts paid in total as entrance fees/examination fees by students taking the R.I.B.A. examinations is on a comparable level with those paid by students taking other institutions' examinations.
- (4) The amounts paid as exemption fees/entrance fees by students at Recognised Schools is on the whole higher than those paid by students claiming exemption from other institutions' examinations. Other institutions do not, however, have responsibilities corresponding to those of the R.I.B.A. in relation to the Recognised Schools.

<sup>1</sup> e.g. University College: B.Sc.(Eng.): 13 guineas exam. fees + £2 10s. registration fee (full-time) or £1 registration fee (part-time).

Northampton College: B.Sc.(Eng.): 13 guineas exam. fees + £3 3s. registration fee; Dip. Tech. 10 guineas + £3 3s. registration fee.

L.S.E.: LL.B: 7 guineas exam. fees + £1 1s. entrance fee.



# Practice Notes

Edited by Charles Woodward [4]

**IN PARLIAMENT. Works Contracts—Tenders.** Asked if he will undertake to adopt free and open competitive tendering for all his Department's contracts, and the widest possible use of the usual channels for securing the maximum of public service, the Parliamentary Secretary to the Ministry of Works replied: It is my Department's policy to place contracts for construction work after competitive tendering, but my right hon. Friend does not consider that advertising for an unlimited number of tenders is a satisfactory system. The system of inviting tenders from a selected list of approved firms is the one recommended by several independent committees since 1944 and was commended only a few months ago in the Code of Procedure for Selective Tendering published by the Joint Committee of Architects, Quantity Surveyors and Builders. (16 February 1960.)

**Sale of Land Compulsorily Acquired.** Asked in cases where local authorities were wishing to sell back to its original owner land formerly compulsorily acquired but no longer needed, on what grounds he refused permission to sell at the original price, the Parliamentary Secretary to the Minister of Housing and Local Government replied: Local authorities are required by law to sell land at the best price reasonably obtainable unless they get my right hon. Friend's consent to a lower price. Where the sale is to the original owner, he is ready to consider a lower price if the original purchase was made, under compulsory powers, within the last few years. (15 February 1960.)

**Architects.** Mr. Boyden asked the Minister of Health how the cost of employing private architects for hospital building compares with the cost of similar work performed by the architectural staffs of the regional hospital boards.

Mr. Walker-Smith: Precise assessment is not possible, but there is normally a small saving on the cost of the project when the work is done by architects on the staff of regional hospital boards.

Mr. Boyden: In view of the projected larger programme of hospital building, will the Minister take steps to see that the pay and conditions of architects of regional hospital boards are brought closer to those of architects in private practice, and also consult his colleagues in other Departments to see that there is an adequate supply of architects available for training for both short-term and long-term appointments?

Mr. Walker-Smith: A joint review of salaries of architects of regional hospital boards was undertaken in January 1959 on the agreement of both sides of the Whitley Council. There have been proposals and counter proposals in regard to the remuneration of architects, and I understand that an arbitration is now pending. (22 February 1960.)

**New Buildings (Design).** Mr. Driberg asked the Secretary of State for War how many consultations between his Department and the Royal Fine Art Commission, on the design of new buildings or of major works of reconstruction, there have been in the past five years; which projects were discussed on these occasions; on which occasions regret was expressed by the Commission that there had not been earlier consultation; and in what circumstances the design of a new building is officially regarded as of no artistic importance.

Mr. H. Fraser: We have discussed with the Commission our plans for Woolwich, Chelsea and Wellington Barracks; Redford Barracks, Edinburgh; Millbank Hospital and the Queen Victoria School, Dunblane. On one occasion the Commission expressed regret that it had not been consulted earlier.

The hon. Gentleman's last point is a matter of interpreting the Commission's Royal Warrant which specifies that it should inquire into such questions of public amenity or of artistic importance as may be referred to it from time to time. When in doubt, we consult the Commission.

Mr. Driberg: Can the hon. Gentleman say when he is not in doubt about the artistic importance of any building?

Mr. Fraser: The Commission is a small body, as the hon. Gentleman knows. It cannot be consulted in every single instance. We do consult it and have discussions with it on our general policy. We propose in future to consult it on a considerable number of buildings, including the Hyde Park Barracks, and we have been consulting it outside London on the Castle at Chester. We have good relations with the Commission, and I am glad to say that one of its members is a consulting architect to the War Department.

Mr. Driberg: Are things better now than they were eighteen months ago, when—as the hon. Gentleman must be aware—the Commission complained bitterly of late consultation and inferior and shoddy design?

Mr. Fraser: I think 'bitterly' is an exaggeration. (24 February 1960.)

**Architects and Engineers.** Mr. Boyden asked the Minister of Health how many posts for architects and for engineers, respectively, remain unfilled by regional hospital boards.

Mr. Walker-Smith: These establishments are not subject to specific control by my Department and, consequently, there is no routine collection of current figures. A special inquiry in 1958 showed that on 1 April 1958 there were 16 vacancies for architects against a total establishment of 152 and 42 vacancies for engineers against a total establishment of 128. I regret that no more recent figures are available.

Mr. Boyden: Is the right hon. and learned Gentleman aware that there has been a very great deterioration in the circumstances since then and that the increased programme of building requires many more architects and engi-

neers? What does he propose to do to provide recruitment not only for the future but to make up the present existing deficiencies?

Mr. Walker-Smith: It may be that the figures have already deteriorated since 1958, the latest year for which I have them available. I attach importance to this question in the context of the increased hospital building programme. The precise rates of remuneration will be determined by arbitration, but, of course, the management side offered a substantial increase. (29 February 1960.)

**MINISTRY OF HOUSING AND LOCAL GOVERNMENT. Housing Acts. Sale and Leasing of Houses.** Circular 5/60 dated 15 February gives guidance to local authorities in the selling and leasing of houses held by them. The Circular is obtainable at H.M.S.O., price 6d. net.

Circular 10/60 dated 24 February refers to the Town and Country General Development (Amendment) Order, 1960 (S.I. 1960 No. 283), and the Town and Country Planning (Use Classes) (Amendment) Order, 1960. The first Order brings large agricultural buildings under planning control and came into operation on 25 February.

The second Order (S.I. 1960 No. 282) amends Class 1 in the schedule to the Use Classes Order of 1950, so that the change of use of a shop to use for the sale of motor vehicles will constitute development requiring planning permission. In making this amendment the Minister is concerned primarily with the effects which these changes of use may have on road traffic and, in certain circumstances, on local amenity. A consequential amendment to the General Development (Amendment) Order makes it unnecessary to obtain specific permission for a change from use for car-sales back to shop use. The Circular is obtainable at H.M.S.O., price 3d. net.

## LAW CASE

**Interference with Rights of Light.** In the JOURNAL for March 1959 at page 176, a case was noted where the issue was whether an architect was negligent in respect of interference with the rights of light of an adjoining owner in his design and siting of a block of flats on the building owner's land. The action against the architect was dismissed with costs. His Lordship accepted that the architect's instructions were restricted to so much of the architect's task as was necessary to obtain planning permission and unless and until the siting of the proposed building was accepted actually or implied by the architect as a professional obligation, he owed the building owner no legal duty, and his gratuitous opinion could not attract liability for the consequences of an honest though mistaken conclusion—if in fact the conclusion was mistaken.

In the Court of Appeal on 20 January the building owner appealed against the judgment in the Court below and his appeal was dismissed with costs.

The architect did not seek to uphold the judgment in the Court below that he owed no legal duty to the building owner.

The siting of the new building was turned round on the advice of the architect and it was not for the Court of Appeal to say that this advice was wrong. Two experts on the very technical subject of light had given evidence and gave opposite views as to whether the architect's advice was right or wrong. In these circumstances the Court did not think that the architect's advice fell below the standard demanded of an architect that he should act with reasonable professional skill and competence. Assuming that the architect's advice was wrong the Court did not hold it to be negligent, because a wrong opinion was not necessarily negligent.

The appeal of the building owner was dismissed with costs and leave to appeal to the House of Lords was refused. (THE ESTATES GAZETTE, 13 February 1960.)

## Correspondence

### REPORT OF THE COMMITTEE ON ARCHITECTURAL EDUCATION

*The Editor, R.I.B.A. Journal*

Dear Sir,—Certain points in Mr. Beaty-Pownall's letter on architectural education (February JOURNAL) need clarification.

First (and contrary to the Oxford Committee's expectations) it does seem logical to many of us that 'A' level boys (perhaps after an interval) will require training outside the full-time schools. In spite of numerous, and (only possibly) increasing grants, there will always be those who, for various reasons, will not be able to attend a full-time school. By the time these candidates come forward, it is quite possible that the dwindling number of 'O' level students in part-time schools will have forced these schools to close, with the consequence that there will be no apparent demand for external examinations.

As Mr. Beaty-Pownall makes clear, the Board is opposed to part-time education; it goes without saying that the Oxford Committee is opposed to part-timers, since the full-time schools (which have hardly made a success of the part-time courses they offer) were overwhelmingly represented there; it is well known that these schools have no interest in part-time education. But what Mr. Beaty-Pownall is really saying is that his Board is opposed to the rigid system of part-time education which the Board itself created. Perhaps it would be a good thing to look further than this majority system for a more helpful example—for instance, to the excellent day release school (not associated with a full-time school of architecture) which I see by the statistics is one of the few in the country. I taught at this school for eight years, and I can testify to the imagination and enthusiasm with which the course is organised, and to the *esprit de corps* of the student body there; and this in spite of the crippling system of Testimonies of Study (imposed, it

would seem, by a Board blind to the imaginative approach) which forces the syllabus into a strait-jacket.

I am convinced that this form of part-time education has many advantages on its side, and that it should be examined more closely, to find whether it might form the basis of an expanded scheme.

'Sandwich' courses, suggested by the Board, are just not economically possible for small and medium-sized practices; and these are exactly the places where most can be learned by the part-time student.

As for Mr. Beaty-Pownall's statistics, perhaps he can tell us just where skilled unqualified assistants can come from if part-time training is abolished?

The truth seems to be that the (obviously desirable) decision to raise the entry standard to 'A' level was taken prematurely, before any proper plan had been worked out to deal with the consequences; and, furthermore, before the profession was fully aware of the implications of these consequences.

May I add that I myself was trained at a full-time school.

Yours faithfully,  
C. FLEETWOOD-WALKER [4]

Dear Sir,—In the letter of Mr. D. H. Beaty-Pownall in the last issue of the JOURNAL, it is stated that

'The Board has for some time now encouraged, in the place of this training, sandwich courses in which periods in an office alternate with periods in a school.'

I should be interested to learn:

- (a) If such courses are in operation and at what schools, and for how long such courses have been in existence.
- (b) Whether the Student continues to be paid his salary by his Employer during his attendance at the School. If this is so, then of course, such a scheme could only operate in large offices where the additional overhead expenses could be absorbed.

Yours faithfully,  
F. POTTER [F]

Dear Sir,—Mr. Fleetwood-Walker has asked me to clarify certain points. I am glad to have the opportunity of doing this as his own conclusions may give rise to some misunderstanding. The points are:

1. If a sufficient number of boys does in fact require training outside the recognised full-time courses this will be known by October 1961. The Schools at present preparing candidates for the external examinations of the R.I.B.A. will obviously be continuing such preparations for many years after this date.
2. The Board wish to see variety in the form of courses. The 'strait-jacket' of Testimonies of Study can be shed in any School that can show evidence of an organised course. The Board are not opposed to combined systems of School and office training when these provide adequate time in the School, a reasonably short course, and a fair chance of success in the R.I.B.A. examinations. The Board

recognise several variants which meet these conditions, and it is interesting, in view of Mr. Fleetwood-Walker's remarks, that two sandwich courses of differing type have in fact been proposed jointly by the Allied Societies concerned working in collaboration with the local Schools. May I refer Mr. F. Potter, whose letter is printed above, to the Manchester Society of Architects and the West Yorkshire Society of Architects.

3. The Board did not take this decision to raise the entry standard without due regard to the consequences. The number of people likely to enter the profession was estimated; so too was the fact that all students would not have to spend two years in an office before qualification. It was known that there would still be combined courses, and that the question of skilled assistance and its provision would have to be considered.

Yours faithfully,  
D. H. BEATY-POWNALL [F]  
Chairman, Board of Architectural Education

### SMALL ROLLED STEEL SECTIONS

Sir,—It is at present impossible to obtain the small pre-war rolled steel sections for casement windows and ventilators, as the rolling mills at Darlington inform me that there is practically no demand for them.

Presumably there would be no demand in so-called 'Contemporary' building; but in the case of certain types of small country houses, and more particularly for casement ventilators in churches, for the repair of historic buildings etc., the lack of these sections, and in particular the 'Small Universal' can be very hampering; as the larger sections—even the Medium Universal—look very heavy, especially when it is not feasible to rebate the stone or woodwork in which they are set.

I am told that if I could prove a reasonable demand, the section could be rolled and used again; and I should be most grateful if any architects who would welcome re-introduction of Small Universal and/or Z sections would be so good as to send me a postcard.

Yours faithfully,  
J. S. COMPER [F]  
12 Douglas House,  
Maida Avenue,  
London, W.2.

### SMALL HOUSE PLANS

Dear Sir,—Current correspondence in the JOURNAL by Sidney Loweth, Eric Ambrose and Haig Gudenian regarding Mr. P. N. Dean's letter on the book of Small House Plans has prompted me at last to write to you on this subject.

I was a student with Mr. Dean and we both struggled through the full-time course of study at a Scottish School, during which period I got to know Dean and his views on architecture quite well. When the letter appeared in the JOURNAL's November issue I had to read it twice in order to realise that

Mr. Dean's ideals seemed to have changed completely in a very short period of time—in fact since he went to London from Scotland. I was about to write personally to Dean when I read his statement that 'The layman is not yet ready for such advanced designs', as I could not think of him having such a defeatist philosophy, however, my memory revived—he was always a bit of a leg puller in a semi-serious sort of way. My view is that Mr. Dean wrote his letter merely to provoke forward thinking architects into defending our present day ideals—that the architect should advise and try to influence his client to take the path of good design, design such as is taught in the schools and by our better known architects today. What sort of state would we get into if it was left to the public to dictate style and taste in architecture? Mr. Dean gives us the answer—'something solidly traditional'—no advancement, no new materials, no colour, no individuality, just something like the Joneses next door with their upside-down elephant bungalow.

No, I do not think Mr. Dean can have been very serious with his letter. I should hope his views are similar to those of the British Official working in Paris who is quoted by Mr. Gudenian, the editor of the *Ideal Home Magazine*, as stating that the prizewinner of the Ideal Home Competition for Small Houses should have been thinking in terms of 1980, not 1940!

I hope Mr. Eric Ambrose will not lose faith in the younger set of architects, I can assure him that the fire is still burning strongly.

Yours sincerely,

PHILIP AITKEN [A]

#### R.I.B.A. KALENDAR 1959-60

Dear Sir,—Congratulations to the Institute on the New Glossy Jumbo Size Kalendar! It certainly makes the average trade literature look pretty dim.

The Institute is quite right—we must make it clear to the Squares that our job is to live down all that nonsense about being once a Learned Society. Who cares about decent paper or type that is easy on the eye; what we need to be is bright and slick and, above all, *different*. But, of course, we must all be different in the same way; we can't have any reactionary deviation.

And now it is to be the JOURNAL's turn. Let's make no mistake. As a start, how about renaming it ARCHITECTS' OWN? Then of course we could have a Giant Coloured Supplement and even perhaps a Kiddies' Section.

Like the earlier Kalendar, one trouble with the dear old JOURNAL is that it is far too easily legible. Why not have the boys at Queen Anne's Gate fix you up with some real hip lower-case stuff on 'art' paper?

And so, let the Institute keep flying the banner of our times! This golden age of high tea and no Latin!

Yours faithfully,

RODNEY F. TATCHELL [F]

## Notes and Notices

### NOTICES

**One Hundred and Twenty-second Annual General Meeting, Tuesday 3 May 1960 at 6 p.m.** The One Hundred and Twenty-second Annual General Meeting will be held on Tuesday 3 May 1960 at 6 p.m. for the following purposes:

To read the Minutes of the Seventh General Meeting held on 5 April; formally to admit new members attending for the first time since their election.

To receive the Annual Report of the Council and Committees for the official year 1959.

(Copies of the Annual Report will be sent to members on 19 April.)

Note: It will facilitate matters if members will give the Secretary prior notice of any questions they may wish to ask.

To nominate two members as Hon. Auditors for the ensuing year.

(Light refreshments will be provided before the meeting.)

**Session 1959-1960. Minutes V.** At the Fifth General Meeting of the Session 1959-1960 held on Tuesday 8 March 1960 at 6 p.m.

Mr. Basil Spence, O.B.E., T.D., A.R.A., A.R.S.A., President, in the Chair.

The meeting was attended by about 250 members and guests.

The Minutes of the Fourth General Meeting held on 2 February 1960 having been published in the JOURNAL, were taken as read, confirmed and signed as correct.

The following members attending for the first time since their election were formally admitted by the President: *As Fellows*: R. H. Fielding; *As Associates*: F. R. Baden-Powell, C. E. Barber, M. F. Campbell, E. M. Car, D. E. Church, P. J. Crawley, N. F. Cull, P. J. Finlayson, B. B. Fowle, J. Gray, P. M. Hart, D. D. G. Horne, M. A. Horsman, M. L. Howard, L. E. C. Jackman, G. F. S. Jarvis, Ralph Laniado, K. W. Mills, J. B. Paige, M. A. B. Parflect, K. W. Parker, M. A. Pocock, G. E. Schoon, J. D. V. Smith, D. J. Tucker, G. F. Walters, P. M. Wilson.

Mr. W. A. Allen, B.Arch. [A] having read a paper on 'The Profession in Contemporary Society', a discussion ensued and on the motion of Sir Noel Hall, Principal of the Administrative Staff College, Henley-on-Thames, seconded by Mr. Richard Sheppard (*Hon. Secretary*), a vote of thanks was passed to Mr. Allen by acclamation to which he briefly responded.

The President then presented his Diploma of Hon. Associateship to Cyril Douglas Spragg, C.B.E., M.A.

The proceedings closed at 8.20 p.m.

**Disciplinary Action.** Mr. Donald Alexander Fowler [F] of Derwent House, Wressle, Selby, Yorkshire, has, by decree of the Council made pursuant to the Bye-laws, been expelled from membership of the Royal Institute.

**Cessation of Membership.** Under the provisions of Bye-law 21 the following have ceased to be members of the Royal Institute: *as Associates*: William Swanson Read Bloomfield, Barry Clifford Finch, John David Herbert, Robert Gillespie Meldrum, Robin Rockel, Corry Barraclough Wilson; *as Licentiate*: James Patrick Nicoll.

**R.I.B.A. Kalendar 1960-61.** Members will have realised that the printing strike last year greatly delayed publication of the 1959-60 Kalendar. For the 1960-61 issue we intend to revert to the normal publication date which is 1 October.

Members are asked to notify the Secretary, R.I.B.A., of any necessary changes in this next issue, particularly changes of address, as soon as possible, and in any event not later than 30 June.

The annual Kalendar is inevitably an expensive item, and there is clearly no point in printing more copies of it than are really needed. It has become clear that many members are not interested in having a personal copy as long as they have ready access to one in the office. It has therefore been decided in the interests of economy that the Kalendar should be sent only to those who specifically ask for it. A postcard will accordingly be enclosed with the May issue of the JOURNAL for completion and return by anyone who would like to have a copy of the next Kalendar as soon as it is published in October.

Incidentally, members who have wondered why the new Kalendar is the size it is are reminded that this stems from a Council decision last year to adopt the international 'A' sizes of paper, and in particular the A4 size for all reference material.

#### R.I.B.A. Kalendar 1959-60. Corrections.

Page 59.—The name A1957 Brown: Rober Glendenning, B.A.(Arch.) (Manchester) (18356) should read Brown: Roger Glendenning, B.A.(Arch.) (Manchester) (18356).

Page 109.—The affix L1954 against the name of Hart: Lionel John, Dipl.Arch.(Oxford) should read A1954, as Mr. Hart is an Associate.

Page 158.—The entry A1934 O'Farrell: Edgar Charles, Dip.Arch.(Lond.), should read A1934 O'Farrell: Edgar Charles, B.Arch. (Lond.).

Page 209.—The particulars against the name of Mr. David Tennyson Waters, Dipl.Arch. (Northern Polytechnic) [A] (14159) should read (W. H. Saunders, Son and Waters) 53 Goodge Street, W.1 (Langham 9908-9).

Page 213.—The address of Mr. Joseph Derek Whitehouse [A] (10300) should read 65A Pillory Street, Nantwich, Cheshire.

Page 213.—The address of Mr. James Ernest Whittemore [A] (19433) should read 17 Hughenden Road, Worcester Park, Surrey.

**British Architects' Conference, Manchester, 15 to 18 June 1960.** A cordial invitation is extended to all members and Students of the R.I.B.A., the Allied Societies and the Architectural Association to attend the Conference to be held at Manchester from 15 to 18 June. Full details of the programme and the application form are enclosed with this issue of the JOURNAL sent to members in the United Kingdom. Students and others requiring a programme should apply to the Secretary, R.I.B.A.

Application forms should be completed and sent to the Secretary, R.I.B.A., as soon as possible, but in any case not later than 25 May.

Members are again reminded that hotel reservations should be made as soon as possible as the hotels could not guarantee to keep rooms later than the end of March.

#### CURRENT R.I.B.A. PUBLICATIONS

The following is a list of the main R.I.B.A. publications with their prices.

##### Agreement, Forms of

Form of Agreement for General Use between a Private Building Owner and an Architect or a Firm of Architects.



Form of Agreement for General Use between a Building Owner (being a Statutory Authority) and an Architect or a Firm of Architects.

Form of Agreement between a Local Authority and a Firm of Architects for Housing Work.

Form of Agreement between a Local Authority and a Firm of Architects for Multi-Storey Flats.

Form of Agreement between the Promoters and a Firm of Architects appointed as the Result of a Competition.

Price 6d. per form (inclusive of purchase tax). Postage 3d.

**Architect as Arbitrator, The**  
Price 5s. Postage 6d.

**Architect and His Work, The**  
Price 6d. Postage 3d.

**Articles of Pupilage, Forms of (Copyright)**  
Price 1s. 8d. (inclusive of purchase tax). Postage 3d.

**Before You Build. Free.**

**Certificates, Architects', Form Prepared by the Practice Committee**  
Copyright Book of 100 Certificates.  
Price 17s. (inclusive of purchase tax). Postage 1s. 6d.

**Code of Procedure for Selective Tendering**  
Price 2s. Postage extra.

**Competitions, Architectural, Regulations for. Free.**

**Communications in the Building Industry**  
Report of a Tripartite Conference held at Sundridge Park Management Centre, November 1958.  
Price 2s. 6d. Postage 4d.

**Conditions of Engagement and Scale of Professional Charges**  
Price 6d. Postage 3d.

**Contract, Form of Agreement and Schedule of Conditions**  
For use with quantities: 1939 revised 1957. Copyright.

For use without quantities: 1939 revised 1957. Copyright.  
Price 2s. 2d. per form (inclusive of purchase tax). Postage 6d.

Adapted for the use of Local Authorities, for use with quantities: 1939 revised 1957. Copyright.

Adapted for the use of Local Authorities, for use without quantities: 1939 revised 1957. Copyright.

Price 2s. 5d. per form (inclusive of purchase tax). Postage 4d.

Fixed Fee Form of Prime Cost Contract for use in the repair of war-damaged property: 1946 revised 1959. Copyright.

Price 2s. 2d. (inclusive of purchase tax). Postage 6d.

Cost Plus Percentage Form of Prime Cost Contract for use in the repair of war-damaged property: 1946 revised 1959. Copyright.

Price 2s. 2d. (inclusive of purchase tax). Postage 6d.

**Examination, Intermediate, Questions Set At**  
Price 1s. per examination. Postage 3d.

**Examination, Professional Practice, Questions Set At**  
Price 6d. per examination. Postage 3d.

**Examinations, Final and Special Final, Questions Set At**  
Price 1s. per examination. Postage 3d.

**Examinations to Qualify for Candidature as Building Surveyor under Local Authorities, Questions Set At**  
Price 1s. per examination. Postage 3d.

**Membership of the R.I.B.A.**

Particulars of the Qualifications for Association.

Price 2s. 6d. Postage 4d.

**Party Wall Notice Forms, for Use Under the London Building Act**

Form A—Party Structures.

Form B—Party Fence Walls.

Form C—Intention to Build within Ten Feet and at a lower level than the bottom of the foundations of adjoining Owner's Building.

Form D—Intention to build within Twenty Feet of the adjoining Owner's Independent Building and to a depth as defined in Section 50(1)(b).

Form E—Party Walls and Party Fence Walls on line of Junction of adjoining lands.

Form F—Walls or Fence Walls on Building Owner's land with footings and foundations projecting into adjoining Owner's land.

Form G—Selection of Third Surveyor.  
Price 7d. per form (inclusive of purchase tax). Postage 3d.

**Prizes and Studentships (Pamphlet)**  
Price 3s. Postage 6d.

**Report of the Special Committee on Architectural Education, 1945**  
Price 2s. 6d. Postage 6d.

## BOARD OF ARCHITECTURAL EDUCATION

**R.I.B.A. Ashpitel Prize, 1959.** Mr. Neil Bentham [*Student, R.I.B.A.*] of 23 Beechfield Road, Smithills, Bolton, Lancs. obtained the highest number of marks in the Final Examinations held in 1959 and has therefore been awarded the Ashpitel Prize.

Mr. Bentham, who is 25 years of age, received his architectural training at the Regional College of Art, Manchester.

**R.I.B.A. Sir Banister Fletcher Prize, 1959.** Mr. Michael Lutton Manwell of 70 Osborne Park, Belfast obtained the highest number of marks in the Intermediate Examinations held in 1959 and has therefore been awarded the Sir Banister Fletcher Prize.

Mr. Manwell, who is 21 years of age, received his architectural training at the Belfast College of Art.

## COMPETITIONS

**Note.** An applicant for the conditions of a competition must state his registration number.

**Burgh of Dumbarton Architectural Competition: Central Area Redevelopment.** Last day for submitting designs: 30 May 1960. Full particulars were published in the JOURNAL for March, page 182.

**New Hospital at Boston, Lincolnshire.** Last day for questions: 16 May 1960. Last day for submitting designs in the first stage: 30 September 1960. Particulars were published in the JOURNAL for March, page 182.

**Workshop Design Competition (Warwickshire Rural Community Council).** Last day for submitting designs: 12 noon, 23 April 1960. Full particulars were published in the JOURNAL for March, page 182.

The Westminster City Council intend to promote an architectural competition for

redevelopment for housing purposes of a site bounded by Vauxhall Bridge Road, Churton Street, Tachbrook Street and Rampayne Street, having a total area of about 13 acres.

Assessor: Mr. Philip Powell, O.B.E., A.A.Dipl. [F].

Particulars will be published during May or June 1960.

**Metropolitan Cathedral of Christ the King, Liverpool.** Full particulars were given in the JOURNAL for September, page 404, but in addition it should be noted that corporate members of the overseas societies allied to the R.I.B.A. are also invited to compete.

Last day for submitting designs: 4 p.m. on 3 August 1960.

**Competition for Design of Medical Teaching Centre, Cardiff.** The last date for the receipt of designs in the competition for the Medical Teaching Centre in Cardiff (The University Hospital of Wales) is 30 April. The adjudication will take place during May, and it is hoped to announce the result about the middle of the month.

The designs will be exhibited in the gymnasium at Mandy Barracks, Whitchurch Road, Cardiff, for a period of six days towards the end of May, the exact dates to be announced later in the press. Further particulars will also be obtainable from Dr. D. G. Morgan, Secretary to the Board of Governors of the United Cardiff Hospitals, at the Royal Infirmary, Cardiff.

## COMPETITION RESULT

**Design of Shopping Centre and Adjacent Houses, Grangemouth**

1st. (£1,500) Philip S. Cocker [A].  
2nd and 3rd premiums merged. (£1,250 = £312 10s. each) Frank Dolezal, Carl Hunter and Thomas Reilly; R. Gorbings [A], E. J. Askew [A] and T. D. Carter [A]; James B. Kennedy [A], J. B. Fitzgerald [A], R. R. Black [A] and Donald Bain [A]; B. Z. Gillinson [A], C. H. Barnett [A] and R. Allend.  
Commended (and awarded honorarium of £100 each): I. G. Worsley and J. K. Hunt [A]; Alison and Hutchison and Partners [F/A].

## ALLIED SOCIETIES

**Changes of Officers and Addresses**

**Nottingham, Derby and Lincoln Society of Architects, Derbyshire Branch.** Hon. Secretary, Ronald Crawford, D.F.C. [A], 27 Gisborne Crescent, Allestree, Derby.

**Southport Architectural Society.** President, W. L. Lowe [F]. Hon. Secretary, S. C. Jones [A], Williams Deacons Bank Chambers, 271 Lord Street, Southport, Lancs.

**South Wales Institute of Architects.** President as from 1 July 1960, Howard Williams [F].  
**Eastern (Newport) Branch.** Chairman, as from 1 July 1960, M. D. Lewis [A].

**Ontario Association of Architects.** President, James W. Strutt, 304 Laurier Avenue West, Ottawa 4, Ontario, Canada.

**Northamptonshire, Bedfordshire and Huntingdonshire Association of Architects. R.I.B.A. Architecture Bronze Medal.** Nomination forms in respect of the above award for a building of exceptional merit built during the three-year period ending 31 December 1959 within the area of the Association are obtainable from the Hon. Secretary, Mr. Peter B. Dunham [F], 2 Union Street, Luton, Bedfordshire. Nominations must be submitted not later than 1 May 1960.



# Notes from the Minutes of the Council

MEETING HELD ON 8 MARCH 1960

## Appointment of R.I.B.A. Representatives

(a) *Architects' Registration Council*, for the year beginning 1 April 1960. R. J. Hurst [F] in place of H. T. Swain [A] (appointed by the Council 2.2.60) who was unable to serve.

(b) *Central Panels Committee (R.I.B.A./C.P.R.E.)*. J. E. A. Brownrigg [A] in place of T. Mellor [A] who has resigned from the Committee.

(c) *R.I.B.A. Architecture Bronze Medal Juries*. Northamptonshire, Bedfordshire, and Huntingdonshire Association of Architects. J. Clifford Barker [A].

*West Yorkshire Society of Architects*. Professor J. H. Napper [F], President, Northern Architectural Association.

**Allied Societies' Conference.** The Secretary reported that the following have been appointed for the session 1960-61: Chairman: H. Jackson [F]; Vice-Chairman: N. H. Fowler [F]; President: J. A. H. Mottram [A], President of the Royal Incorporation of Architects in Scotland. Under the terms of Bye-law 28(1)(b) Mr. Jackson will be a Vice-President R.I.B.A. for the coming Session.

**Department of Architecture, Brighton College of Art and Crafts.** The Council approved the recommendations of the Board of Architectural Education that first, the recognition of the three years' full-time day course at the above college for exemption from the R.I.B.A. Intermediate Examination be continued under the usual conditions; secondly, the five years' full-time Diploma Course be recognised for exemption from the R.I.B.A. Final Examination (without Part Three, the Examination in

Professional Practice and Practical Experience) under the usual conditions.

**Membership.** The following members were elected: as Fellows 5; as Associates 89.

**Students.** 50 Probationers were elected as Students.

**Applications for Reinstatement.** The following applications were approved: as Associates: Arthur Bashforth, James Donald Hayton, William Dalton Ironside, Atholl James Murray, Clarence Lonsdale Watson; as Licentiate: Louis Henry Worrell.

**Obituary.** The Secretary reported with regret the death of the following members: Sir Leonard Woolley [Hon. Associate], Maxwell Ayton [F], Arthur Gilbert Berry [F], Sir Giles Gilbert Scott, O.M. [Past President], John Holliday Haughan [F], Dr. William Adam Singleton [F], Herbert Morgan Smail, O.B.E., T.D., D.L. [F], Alexander Thorpe [F], Harold John Higgs [Retd. F], James Brodie [A], Kenneth George Firman [A], John Culy Harvey [A], Basil Bramston Hooper [A], John William McCartney [A], Edward Francis Massey [A], John Anthony Calbert Platts [A], Gordon Ernest Smea [A], Ian Taylor [A] (Serial No. 17995), Miss Mary Leonora Wilkinson [A], Thomas Stott [Retd. A], Eric Norman Bailey [L], Norman Billington [L], Launcelot Cyril Clarke Jones [L], Alexander Kurz [L], Malcolm Waverley Matts, M.V.O. [L], Frank Newton [L], Thomas Laurence Price [L], Harold John Sloggett [L], Stanley Thomas Tanner [L], A. Roland Walsingham [L], William Arthur Whitwell [L], Robert Clifford Young [L], Vivian John Cummings [Retd. L], George Edwards [Retd. L].

By resolution of the Council the sympathy and condolences of the Royal Institute have been conveyed to their relatives.

Place, London, S.W.1. A follow-up to this conference is being discussed.

**R.I.B.A.G.S.** The R.I.B.A. Golfing Society played their annual match against the Cambridge Stymies on Saturday 27 February at St. George's Hill Golf Club, Weybridge.

As always this match was played on level terms with the University Students who fielded a strong team. The result of the foursomes at lunch time was 3½ matches to 1½ matches to Cambridge, but the afternoon foursomes proved disastrous to the Architects.

The Cambridge Stymies won the match by 8½ matches to 1½.

**R.I.B.A. Cricket Club.** This year's officers are: C. A. R. Norton, Captain; D. L. Robinson, Vice-Captain and Secretary; J. G. Batty, Treasurer.

The Club would welcome new members, and would try to give everyone a game who is a member of the profession, irrespective of whether he is up to county standard, as is one member of the club, or more or less a rabbit.

The fixture list for this season is as follows:

11 May: v. Vitruvians, at Elstree (2.30 start).

25 May: v. Blue Circle, at Wimbledon (11.30 a.m. start).

15 June: v. A.A., at Elstree (2.00).

19 July: v. L.M.B.A., at Earlsfield (11.30).

27 July: v. R.I.C.S., at Cheam (11.30).

24 August: v. C.C.C., at Wimbledon (11.30).

# Obituaries

**Charles Alfred Harding, M.I.Struct.E. [F]**, died early in November 1959, aged 72.

Mr. Harding received his architectural training at the Glasgow School of Architecture, at the British School at Rome, and as a travelling student on the Continent. He was articled to the late W. Forrest Salmon [F].

In 1905 Mr. Harding won the President's Prize of the Glasgow Institute of Architects, and in 1909 was the Whitelaw Silver Medallist.

Mr. Harding went to north-east England in 1919, and was a partner in the firm of Percy L. Browne and Son and Harding [F/A] of Newcastle. Between 1921 and 1925 he was a lecturer in architecture and building construction at Rutherford Technical College.

A former president of the Northern Architectural Association, Mr. Harding's period of office was from 1952 to 1954.

In his spare time he made expert etchings and engravings. His writings included *A Papal Pleasure House*, *Christopher Wren: the Man and his Work*, *Plates on Building Construction*, *Pirro Ligorio*, and various papers in the professional press.

**Sir Giles Gilbert Scott, O.M., R.A., D.C.L. (Oxon.), LL.D. (Liverpool), LL.D. (Cantab.) [Past President]**, died on 8 February 1960, aged 79.

The JOURNAL is indebted to Sir Hubert Worthington, O.B.E., R.A. [F] for the appreciation of Sir Giles Gilbert Scott which appears on page 193. The following are additional details of Sir Giles Scott's career and principal works.

Sir Giles Gilbert Scott was educated at Beaumont College. He commenced practice in London in 1902. From 1920 to 1921 he was President of the Architectural Association. In 1922 he was made a Knight of the 1st Class of the Order of St. Olav (Norway). He was awarded the R.I.B.A. London Architecture Bronze Medal in 1927, for Chester House. Among his honorary degrees was that of LL.D. of Cambridge. Sir Giles was made an Honorary Fellow of Trinity College, Toronto, and was an Honorary Fellow of the American Institute of Architects. He was President of the Council of The Building Centre.

Sir Giles served on many committees: he was a past member of the R.I.B.A. Council, Executive Committee, Art Standing Committee and Registration Committee; the Franco-British Union of Architects, the London Architecture Bronze Medal Jury, the Royal Gold Medal Committee, the Official Architectural Committee, the Board of Architectural Education, the R.I.B.A. Reconstruction Committee and the British Section of the Comité Permanent International des Architectes.

His church design work was widespread and among his principal works additional to those mentioned by Sir Hubert Worthington are St. Columba's Cathedral, Oban; St. Anthony's, Preston; All Saints, New Brighton, Cheshire; Our Lady and St. Alphege, Bath; Our Lady Star of the Sea, Broadstairs; St. Joseph's (and Presbytery), Sheringham, Norfolk; St. Ninian's, Restalrig, Edinburgh; Church of the Annunciation, Bournemouth; and that of the Carmelite Convent, North Kensington. Sir Giles worked on the restoration of St. George's Chapel, Windsor; Chester Cathedral; Burnby Church, Yorkshire; St. George's Church, Kidderminster; and Westminster Abbey.

He designed fittings for churches in: Douglas, Isle of Man (reredos, etc.); Windsor (Holy Trinity, reredos); Gospel Oak, North

## GENERAL NOTES

**'The Architect and the Church.'** This was the subject of a two-day conference organised by Christian Teamwork held on 4 and 5 March under the chairmanship of Mr. Edward D. Mills, C.B.E. [F]. It was attended by 50 architects, nine clergy, and other interested members.

Last May an international conference of architects, called together by the Ecumenical Institute of the World Council of Churches at Bossey, Geneva, formulated thirteen points to guide church architects. The purpose of the conference was to consider this statement. It considered church building as an expression of the presence of Jesus Christ in the world through His Body the Church.

The opening discussion on the first day was preceded by an illustrated lecture on modern church architecture on the Continent, supplemented by the work of members of the conference. This was introduced by Mr. Edward Mills.

On the second day there were addresses on 'The work and life of the Church as a community with a mission and a living message for the modern world'; and 'The Church's instructions to the architect', by the Rev. Gilbert Cope, M.Sc., and the Rev. Douglas Wollen, M.A.; and 'A good church building is normally the finished work of a single designer, briefed by the congregation and not closely controlled by a committee', by Mr. George G. Pace [F] and Mr. Paul Mauger [F].

A report of the conference is obtainable on application to Christian Teamwork, 1 Whitehall

St. Pancras (All Hallows); Accrington (St. Anne's); Southwark (All Hallows); Kilburn (St. Augustine's); Newfoundland (St. John's Cathedral, new reredos); Kensington (St. Mary Abbots, memorial reredos); and a screen for Exeter Cathedral.

Sir Giles was responsible for several chapels. They included St. George's Chapel (Cheshire Regimental Memorial) and SS. Nicholas and Leonard in Chester Cathedral; a war memorial chapel in St. Michael's, Chester Square; a chapel in Kidderminster Parish Church; and chapels in Whitelands Women's Training College, Putney; the Convent of the Visitation, Harrow; and Bromsgrove School. He also designed a vicarage for St. Francis Terriers, High Wycombe, Buckinghamshire.

He built school houses and school buildings for Ampleforth College, Yorkshire; a chemistry wing and dormitory wing for Downside School; and a school house for Beaumont College. He worked (with Messrs. Gutteridge and Gutteridge [F]) on the Turner Sims Library, Southampton University.

Sir Giles's numerous memorial works include that to King George V in Old Palace Yard, S.W.; the chancel of All Hallows Church, Gospel Oak, North St. Pancras; and war memorials at Beaumont College (in collaboration with Adrian Gilbert Scott, C.B.E. [F]), Ditton (Kent), Bridport (Dorset), Oswestry (Shropshire), Penshurst (Kent), Coxton, Preston and Wigan (Lancashire), Bangor (Wales), and St. Mary's Clapham.

Among the large office buildings for which Sir Giles was jointly responsible are: Vincent House, Vincent Square (in collaboration with A. G. Scott and F. P. M. Woodhouse [A]); City Gate House, Finsbury Square, London (with F. R. Gould Wills [F]); and Friends' Provident and Century Life Office, Bristol (with A. W. Roques [F]). Sir Giles was responsible for Electricity House, Bristol.

Other London buildings include Crophorne Court (flats) in Maida Vale; 129 Grosvenor Road, S.W.; 22 Weymouth Street, W.1; an additional block to County Hall (with E. P. Wheeler [F] and F. R. Hiorns [F]); and the Phoenix Theatre, Charing Cross Road (with B. Crewe and C. Masey [F]).

In addition to Battersea Power Station (in collaboration with F. D. Halliday [F]) and Bankside, Sir Giles designed the Berkeley atomic power station on the Severn estuary; and Rye House power station.

Sir Giles was architect for Waterloo Bridge in collaboration with Messrs. Rendel, Palmer and Tritton and Sir Peirson Frank, L.C.C. Engineer.

**Alexander Thorpe [F]** died on 2 February 1960, aged 74.

Mr. F. W. Holder [F], Chief Architect to the Ministry of Agriculture, Fisheries and Food, writes:

'Born in 1886, Alexander Thorpe was articled in Worcester, and came to London to join the late Sir Raymond Unwin [F] and Barry Parker [F] on the early work of planning and building the Hampstead Garden Suburb.

'He served through the first world war, first in the R.N.V.R., and subsequently in the Royal Artillery in which he held the rank of captain in the anti-aircraft branch.

'At the end of hostilities he joined the Office of Works for a short time, before transferring to the then Ministry of Agriculture as a superintending architect in charge of a region.

'In 1922 he left the Ministry and entered private practice as a partner in the firm of Bishop and Etherington-Smith [A/L], returning to the Ministry in 1934 as its Chief Architect in succession to the late Edwin Gunn [Retd. A],

where he served until his official retirement in 1952, and stayed with the Ministry for a further six years in a temporary capacity.

'His most important work for the Ministry was done at the national studs at Gillingham (Dorset) and West Grinstead, and at the Foot and Mouth Disease Research Station at Pirbright. He was instrumental in designing the 'M.A.F. Components', which enabled agricultural buildings to be constructed at a time when steel and timber rationing was restricting the resurgence of building after the second world war.

'He was responsible also for most of the technical material in the Ministry's *Post-War Building Studies No. 17 (Farm Buildings)*, the first important official publication on this subject.

'Alex Thorpe was a man of great personal charm, who inspired respect and affection among all who had the privilege of working with him. He held strong views on many subjects, most of which stemmed from his dislike of the shoddy or second-rate. His knowledge and experience of the craft of building made him at times suspicious of some modern trends, which he often found difficult to reconcile with his own high standards.

'Apart from his work, his greatest interest lay in his collection of old maps and topographical books, and he was an authority on old furniture and china.

'For the last few years of his life he was a widower. One son survives him.'

## Membership Lists

### ELECTION: 8 MARCH 1960

The following candidates for membership were elected on 8 March 1960.

#### AS FELLOWS (5)

Ede: Ernest Darrell, A.A.Dipl. [A 1948], Pembroke, Bermuda.  
Hartford: Huntley Julian Lewis, M.A.(Cantab.) [A 1948], Salisbury, Southern Rhodesia.  
Hitch: Harold John, Dipl.Arch.(The Polytechnic) [A 1939], Brisbane, Queensland, Australia.  
Ross Mackenzie: Callum Duncan Malcolm Donald Charles Allan, M.C., B.Sc., B.Arch.(C.T.) [A 1949], Salisbury, Southern Rhodesia.  
van Heerden: Jan Jeremias Moll, B.Arch.(C.T.) [A 1949], Salisbury, Southern Rhodesia.

#### AS ASSOCIATES (89)

Alusi: Moses Kenechuku, Dip.Arch.(Birm.), Manchester.  
Armitage: Leo, Dipl.Arch.(Leeds), Sunderland.  
Bagot: Brian Duncan, B.A.(Arch.)(Lond.).  
Baker: (Miss) Ruth Ann, Dip.Arch.(Birm.), Cheltenham.  
Barton: James Roy, Leicester.  
Bray: Eric John, Leicester.  
Brettell: Keith Geoffrey, Dip.Arch.(Birm.), Old Colwyn, Denbighshire.  
Broadbent: Derek, Halifax.  
Bull: Richard, Dip.Arch.(Wales), Taunton.  
Burfoot: Richard Geoffrey, Dip.Arch.(The Polytechnic), Chichester.  
Burton: David Richard, Dipl.Arch.(Oxford), Ramsey.  
Clow: Colin Albert, Pudsey.  
Clutterbuck: (Miss) Susan Jennifer, Dip.Arch.(Leics.), Leicester.  
Crawford: Archibald, Glasgow.  
Crighton: Peter Alexander, Dip. Arch.(Leics.), Leicester.  
Cripwell: Peter, Dip.Arch.(Birm.).  
Dangerfield: David Marcus, Halifax.  
Darbourne: John William Charles, B.A.(Arch.)(Lond.).  
Deeming: Roger Samuel, Dip.Arch.(Birm.), Leamington Spa.  
Deshpande: Gajanan Anant, Thana, Bombay State, India.

Dobson: Stephen Edmund, Dip.Arch.(Birm.), Wolverhampton.  
Duff: George Campbell, D.A.(Glas.), Bearsden.  
Freeman: Trevor Laurence Conquest, Dipl.Arch.(U.C.L.).  
Gibbs: Kenneth, Dip.Arch.(Birm.), Solihull.  
Gilmour: Andrew, D.A.(Edin.).  
Gokhale: Chintaman Bhaskar, Dhantoli, Nagpur, India.  
Goldsmith: Philip Selwyn, B.A.(Cantab.), Newark.  
Grimes: Bernard, Dipl.Arch.(U.C.L.), Londonderry.  
Hall: John Michael Dryden, Dip.Arch.(Auck, N.Z.), Christchurch, New Zealand.  
Hands: Raymond, Hornchurch.  
Harrison: (Mrs.) Elizabeth Margery, B.Arch.(Dunelm.), Huddersfield.  
Heasman: Albert.  
Henry: George Kenneth, Dip.Arch.(Leics.), Leicester.  
Herchenroder: (Miss) Marie Helene, M.A.(Cantab.), Dipl.Arch.(U.C.L.).  
Hughes: David Loxley, Dip.Arch.(Wales), Rhonda.  
Ingram: Stuart Lister, D.A.(Glas.), Glasgow.  
Innocent: Raymond Cyril, Dip.Arch.(Wales), Cardiff.  
Jarrett: David William, Dipl.Arch.(Canterbury), Sittingbourne.  
Javeri: Ratnakar Madhusudan, Bombay, India.  
Jeffels: Michael William, Dipl.Arch.(Leeds), Peterborough.  
Jerome: Michael Charles, B.Arch.(C.T.).  
Johnson: Brian William, Dip.Arch.(Leics.), Birmingham.  
Jukes: William John, Dip.Arch.(Birm.), Sutton Coldfield.  
Kershaw: Bryan Sansom, Dipl.Arch.(Oxford), Oxford.  
Knight: Ronald Stuart, Exeter.  
Lord: Thomas Livingstone, Ashton-under-Lyne.  
Lubbe: Alwyn Joseph, Durban, Natal, S. Africa.  
Lucy: Edmund George, Newcastle upon Tyne.  
McLeod: Simpson, D.A.(Glas.), Glasgow.  
Mehta: Jaysukh Vannmalidas, Bombay, India.  
Milnes: William Edwin, Dip.Arch.(Sheffield), Sheffield.  
Mistry: Dara Bomanshaw, Bombay, India.  
Mitchell: William Anthony, Dipl.Arch.(Leeds), Castlerock.  
Moore: Geoffrey Brian, Dip.Arch.(Birm.), Birmingham.  
Newton: John, Dip.Arch.(Leics.), Lincoln.  
Norris: Leslie, South Shields.  
Oak: Umakant Purushottam, Poona, India.  
Ogle: Douglas Stronach, B.Arch.(Dunelm.), Newcastle upon Tyne.  
O'Maille: Claran, B.Arch.(N.U.I. Dublin), Blackrock, Co. Dublin.  
Palmer: William Bernard, Dip.Arch.(Wales), Cardiff.  
Parekh: Praveen Jagannath, Bombay, India.  
Parkinson: Francis Alan, Dipl.Arch.(Leeds), Wakefield.  
Patankar: Dinkar Baburao, Saraswat Colony, Dist. Thana, India.  
Patel: Chandrakant Gulabdas, Bombay, India.  
Payne: Barry William, Dip.Arch.(Leics.), Northampton.  
Penn Smith: Derek John, Dip.Arch.(Leics.), Dip.T.P.(Dunelm.), Leicester.  
Phillips: Huw Trefor, Dip.Arch.(Leics.), Leicester.  
Phillips: Roger Elliott, B.Arch.(Wales), Swansea.  
Pountney: John David, Dip.Arch.(Birm.), Wolverhampton.  
Redman: John, Dip.Arch.(Wales), Derby.  
Richards: John Howard, Dip.Arch.(Birm.), Birmingham.  
Roy Chowdhury: Devoranjon, Calcutta, India.  
Sahasrabudhe: Vishwanath Krishnarao, New Delhi, India.  
Shackleton: David Holcroft, Dip.Arch.(Wales), Newport, Mon.  
Shah: Harsukhlal Lavji, Dip.Arch.(The Polytechnic).  
Smalley: Peter, Bolton.  
Stewart: Ian Arthur Ronald, Dipl.Arch.(Oxford), Oxford.  
Taylor: John Edward Harry, Dip.Arch.(Birm.), Stourbridge.  
Thomas: Graham Pryce, Dip.Arch.(Wales), Pontypridd.  
Thomas: James Robert Graham, B.A.(Arch.)(Lond.).  
Ulander: Sven Olof Hugo, D.A.(Glas.), Guildford.  
Urry: (Mrs.) Pamela Anne.

**Voon: Kim Shin**, B.Arch.(Melbourne), Kuala Lumpur, Malaysia.  
**Walter: Sydenham Alfred**, Dip.Arch.(Melbourne), South Yarra, Victoria, Australia.  
**Walters: Anthony Claude**, Dip.Arch.(Wales), Abergavenny.  
**Warburton: Derek**, Manchester.  
**Wareham: Leonard Arthur**, Lusaka, Northern Rhodesia.  
**Wootton: Joseph Smart**, Stafford.  
**Young: Terence Robert**, D.A.(Glas.), Glasgow.

#### ELECTION 3 MAY 1960

An election of candidates for membership will take place on 3 May 1960. The names and addresses of the candidates, with the names of their proposers, are herewith published for the information of members. Notice of any objection or any other communication respecting them must be sent to the Secretary, R.I.B.A., not later than Thursday 14 April 1960.

The names following the applicant's address are those of his proposers.

#### AS ASSOCIATES (38)

The name of a school, or schools, after a candidate's name indicates the passing of a recognised course.

**Andrews: Gordon Elder**, Dip.Arch.(Dunelm.), (King's Coll. (Univ. of Durham), Newcastle upon Tyne, Sch. of Arch.), 125 Rosemead Drive, Oadby, Leicester. Prof. W. B. Edwards, Prof. J. H. Napper, Bruce Allsopp.

**Bakhlé: Nirmalchandra Shriharsh**, A.A.Dipl. (Arch. Assoc. (London): Sch. of Arch.), 93 Gloucester Road Hampton, Middx. Arthur Korn, A. E. Miller, Anthony Cox.

**Brooksbank: Barry Keith**, Dipl.Arch.(Leeds), (Leeds Sch. of Arch.), 126 Huntington Road, York. H. A. Johnson, F. Chippindale, Kenneth Ward.

**Burgess: John Richard Llewellyn**, (King's Coll. (Univ. of Durham), Newcastle upon Tyne, Sch. of Arch.), Park Lodge, Cambridge Road, Rathmines, Dublin. Prof. W. B. Edwards, Prof. J. H. Napper, Bruce Allsopp.

**Byrom: John Burnet**, B.Arch.(Sydney), (Passed a qualifying examination approved by the R.A.I.A.), 27 Champion Grove, Denmark Hill, S.E.5. Prof. H. Ingham Ashworth, Prof. Leslie Wilkinson, G. L. Moline.

**Colam: Euan Kidston**, D.A.(Edin.), (Edinburgh Coll. of Art: Sch. of Arch.), Rosebank Cottage, Old Philpstoun, West Lothian. Applying for nomination by the Council under Bye-law 3(d).

**Collins: Colin John**, Dip.Arch.(The Polytechnic), (The Poly. Regent Street, London: Sch. of Arch.), 22 Westway, Brentwood, Essex. R. Vaughan, John S. Walkden, H. Werner Rosenthal.

**Dixon: Gerald (Final)**, 403 Hythe Road, Willesborough, Ashford, Kent. Joseph C. Fowell, J. L. Stephen Mansfield, Adrian Ashton.

**Donald: Robert Weir**, Dip.Arch.(Abdn.), (Aberdeen Sch. of Arch.: Robert Gordon's Tech. Coll.), 39 Hilton Drive, Aberdeen. E. F. Davies, John MacLennan, A. B. Gardner.

**Flower: Derek**, A.A.Dipl. (Arch. Assoc. (London): Sch. of Arch.), 43 Buckingham Road, Peterlee, Co. Durham. W. J. Scott, Arthur Korn, W. Eric Dow.

**Frean: (Miss) Rosemary Merle**, B.Arch.(Rand), Dip.T.P.(Lond.), (Bartlett Sch. of Arch.: Univ. of London), c/o S.A. Scientific Liaison Office, Africa House, Kingsway, W.C.2. Applying for nomination by the Council under Bye-law 3(d).

**Gasson: Gordon Barry**, Dip.Arch.(Birm.), (Birmingham Sch. of Arch.), 51 Doveridge Road, Hall Green, Birmingham 28. A. Douglas Jones, A. S. Gasson, F. W. B. Charles.

**Gibb: Robert Hugh (Final)**, 'Treslaig', Whitelea Road, Kilmacolm, Renfrewshire, Scotland. Lennox D. Paterson, George F. Shanks, Walter Underwood.

**Harris: Gordon William Davison**, B.Arch. (Dunelm.), (King's Coll. (Univ. of Durham), Newcastle upon Tyne, Sch. of Arch.), 15 Tankerville Terrace, Jesmond, Newcastle upon Tyne 2. Basil Spence, Prof. W. B. Edwards, Prof. J. H. Napper.

**Harter: (Miss) Alice Elizabeth (Mrs. Subiotto)** (Special Final), 65 Parkway, N.W.1. Peter Moro, Denys L. Lasdun, David Stokes.

**Hersch: Geoffrey Laurence**, B.Arch.(Rand), (Passed a qualifying examination approved by the I.S.A.A.), c/o South Africa House, Trafalgar

Square, W.C.2. Applying for nomination by the Council under Bye-law 3(d).

**Holden: Colin Peter**, Dipl.Arch.(Hull), (Sch. of Arch., Regional Coll. of Art, Hull), 19 Cemetery Road, Belper, Derbyshire. J. Konrad, H. D. Priestman, W. Gregory Wilson.

**Hull: (Miss) Aileen Patricia**, D.A.(Edin.), (Edinburgh Coll. of Art: Sch. of Arch.), 'Brockenhurst', 34 Kensington Park, Bangor, Co. Down. N. Ireland. J. H. Swann, A. G. Goligher, James R. Young.

**Hullah: David**, Dip.Arch.(Wales), (Welsh Sch. of Arch.: The Tech. Coll. Cardiff), 8 Harding Street, Tenby, Pembrokeshire. Lewis John, Sir Percy Thomas, Dr. T. Alwyn Lloyd.

**Khosla: Ranjit**, Dip.Arch.(Sheffield), (Univ. of Sheffield, Dept. of Arch.), 42 Connaught Square, W.2. Prof. John Needham, Edward Playne, J. S. Lacey.

**Kilpatrick: Ivan McClements**, Dip.Arch. (Sheffield), (Univ. of Sheffield, Dept. of Arch.), 6 Vivian Avenue, Sherwood Rise, Nottingham. Prof. John Needham, J. Gordon Woollett, T. N. Cartwright.

**Levesque: Harold**, Dip.Arch.(Sheffield), (Univ. of Sheffield, Dept. of Arch.), 38 Ramsden Road, Hexthorpe, Doncaster, Yorks. H. A. Johnson, A. H. Wilson, Prof. John Needham.

**Lewis: Nigel**, Dip.Arch.(Wales), (Welsh Sch. of Arch.: The Tech. Coll. Cardiff), 114 Kimberley Road, Penylan, Cardiff. Lewis John, Dr. T. Alwyn Lloyd, C. F. Jones.

**Lowes: Gabriel**, Dip.Arch.(Dunelm.), (King's Coll. (Univ. of Durham), Newcastle upon Tyne, Sch. of Arch.), 16 Highside Road, Heighington, Darlington, Co. Durham. Prof. W. B. Edwards, Prof. J. H. Napper, Bruce Allsopp.

**Lynch: Francis Andrew Barat**, D.A.(Edin.), (Edinburgh Coll. of Art: Sch. of Arch.), 66 Newbattle Terrace, Morningside, Edinburgh 10. Applying for nomination by the Council under Bye-law 3(d).

**McDonald: John Michael**, Dip.Arch.(Abdn.), (Aberdeen Sch. of Arch.: Robert Gordon's Tech. Coll.), 47 Saltoun Place, Fraserburgh, Aberdeenshire. E. F. Davies, E. H. Firmin, Sidney Kaye.

**Martin: David Selby**, B.Sc.(Tech.), B.A.(Arch.) (Manchester), (Victoria Univ. Manchester: Sch. of Arch.), Barnjet, Stone Cap, Broadstairs, Kent. Prof. R. A. Cordingley, Eric S. Benson, Edgar Ranger.

**Mather: Peter Beresford**, Dip.Arch.(Manchester), (Victoria Univ. Manchester: Sch. of Arch.), 38 Kensington Park Gardens, W.11. Prof. R. A. Cordingley, Allan Johnson, N. Seton Morris.

**Morum: Robin Denis**, B.Arch.(C.T.), (Passed a qualifying examination approved by the I.S.A.A.), c/o Messrs. Nigel Biggar and Partners, 33 Halkett Place, St. Helier, Jersey, Channel Islands. Prof. L. W. Thornton White and applying for nomination by the Council under Bye-law 3(d).

**Owen: Tudor David**, Dip.Arch.(Leics.), (Leicester Coll. of Art and Tech.: Sch. of Arch.), 47 Hadley Road, Barnet, Herts. Robert J. Howrie, B. T. Howells, H. Bennett.

**Penn: (Miss) Helen Elizabeth**, Dipl.Arch. (U.C.L.), (Bartlett Sch. of Arch.: Univ. of London), Brienn, 11 High Street, Pembury, Tunbridge Wells, Kent. Prof. H. O. Corfiato, R. C. White-Cooper, Thos. Ritchie.

**Radwan-Sluzewski: Andrew (Special Final)**, 19 Lowndes Close, S.W.1. Applying for nomination by the Council under Bye-law 3(d).

**Rawcliffe: Laurence Carl**, Dipl.Arch.(Leeds), (Leeds Sch. of Arch.), 13 Monk Bridge Road, Headingley, Leeds 6. F. Chippindale, W. C. Brown, A. W. Glover.

**Robson: Alan Humphrys**, B.Arch.(Dunelm.), (King's Coll. (Univ. of Durham), Newcastle upon Tyne, Sch. of Arch.), Lindisfarne View, Middleton, Belford, Northumberland. Prof. W. B. Edwards, Prof. J. H. Napper, Thomas J. Cahill.

**Smart: Robert George**, D.A.(Edin.), (Edinburgh Coll. of Art: Sch. of Arch.), 13 Glendevon Gardens, Edinburgh 12. Esme Gordon, Alan Reich, E. Riss.

**Wallace: William David Duncan**, Dip.Arch. (Abdn.), (Aberdeen Sch. of Arch.: Robert Gordon's Tech. Coll.), 6 Glendee Terrace, Culter, Aberdeen. Donald Jack, E. F. Davies, Douglas S. McMillan.

**Williams: David Tudor**, Dip.Arch.(The Polytechnic), (The Poly. Regent Street, London: Sch. of Arch.), 94 Falconwood Avenue, Welling, Kent. John S. Walkden, Peter Chamberlin, J. S. Foster.

**Williams: Michael John**, Dip.Arch.(Nottm.), (Nottingham Sch. of Arch.), Guys, William, Letchworth, Herts. William E. Barnes, N. Summers, C. G. Kemp.

#### ELECTION: JULY 1960

An election of candidates for membership will take place in July 1960. The names and addresses of the overseas candidates, with the names of their proposers, are herewith published for the information of members. Notice of any objection or any other communication respecting them must be sent to the Secretary, R.I.B.A., not later than Monday 27 June 1960.

The names following the applicant's address are those of his proposers.

#### AS ASSOCIATES (8)

The name of a school, or schools, after a candidate's name indicates the passing of a recognised course.

**Derrick: Alwyn Athol**, Dip.Arch.(Auck., N.Z.), (Passed a qualifying examination approved by the N.Z.I.A.), Epworth House, Box 333, Suva, Fiji. Ronald C. Muston and the President and Hon. Secretary of the N.Z.I.A. under Bye-law 3(a).

**Jordan: John Edward**, Dip.Arch.(Birm.), (Birmingham Sch. of Arch.), c/o Architects' Co-Partnership, P.M.B. 2115, 1 Regis Aine Street, Lagos, Nigeria. A. Douglas Jones, J. M. Grice, Leo De Syllas.

**Lim: Chin See**, Dip.Arch.(Manchester), (Victoria Univ. Manchester: Sch. of Arch.), c/o 29/31 Main Street, Kuantan, Pahang, Federation of Malaya. Prof. R. A. Cordingley, Eric S. Benson, Leonard C. Howitt.

**Rolfe: Michael Richard**, Dipl.Arch.(Northern Polytechnic), (Northern Poly. (London): Dept. of Arch.), c/o Australia and New Zealand Bank Ltd., 85 Pitt Street, Sydney, N.S.W., Australia. Thos. E. Scott, Sidney F. Burley, C. G. Bath.

**Shwaib: Hamid Abdulsalam**, Dipl. Arch. (Oxford), (Sch. of Tech., Art and Commerce, Oxford: Sch. of Arch.), P.O. Box 115, Kuwait, Arabia. Cyril Mardall, F. R. S. Yorke, Eugene E. Rosenberg.

**Smith: Eric Grant Tennant**, D.A.(Edin.), (Edinburgh Coll. of Art: Sch. of Arch.), c/o Robertson Ward Associates, Long St., St. Johns, Antigua, West Indies. Applying for nomination by the Council under Bye-law 3(d).

**Spear: Robin Edward**, Dipl.Arch.(U.C.L.), (Bartlett Sch. of Arch.: Univ. of London), Apt. 326, 200 Kensington Avenue, Westmount, P.Q., Canada. Prof. H. O. Corfiato, R. C. White-Cooper, Charles W. J. Smeed.

**Swales: Terence George**, A.A.Dipl.(Arch. Assoc. (London): Sch. of Arch.), P.O. Box 1766, Accra, Ghana. M. Patrick, Arthur Korn, Anthony Cox.

## Members' Column

This column is reserved for notices of changes of address, partnerships vacant or wanted, practices for sale or wanted, office accommodation, and personal notices other than of posts wanted as salaried assistants for which the Institute's Employment Register is maintained.

#### APPOINTMENTS

**Mr. K. Allerton** [4] has been appointed Deputy County Architect for Warwickshire.

**Mr. John Clifford Barker**, Dipl.Arch., A.M.T.P.I. [4], Deputy County Architect of Buckinghamshire, has been appointed County Architect, Bedfordshire, in succession to Mr. S. Vincent Goodman [F] who retired in March at the end of 40 years' service with Bedfordshire County Council.

**Mr. Aditya Prakash** [4] is now architect in the office of the Chief Architect and Chief Town Planner, Capital Project, Chandigarh, Punjab, India.

**Mr. Donovan Purcell**, T.D., M.A.(Cantab.) [F],



of Messrs. Purcell and Johnson [FF] of 64 Bethel Street, Norwich, and 4A Bene't Street, Cambridge, has been appointed Surveyor to the Fabric of Ely Cathedral.

Mr. J. R. Talpade [F], Senior Architect, Government of India, assumed charge on deputation on 1 March as Professor and Head of the Department of Architecture, University of Roorkee, Roorkee (U.P.), India, for a period ending 31 May 1960.

#### PRACTICES AND PARTNERSHIPS

Mr. John Boyd Anderson [A] has commenced practice at 20 South Town, Dartmouth, Devon, where he will be pleased to receive trade catalogues and technical literature.

Messrs. Ardin and Brookes [AA] have taken into partnership Mr. Thomas R. Hartnell [A], Mr. Maurice E. Rutledge [A] and Mr. Alan R. Thomas [A]. They will practise under the title of Ardin and Brookes and Partners at their present address: 129 Mount Street, Berkeley Square, London, W.1 (Grosvenor 7728).

Mr. D. J. Kennedy [A] has commenced practice at 17 Castle Street, Tralee, Co. Kerry, Ireland (Tralee 490) where he will be pleased to receive trade catalogues.

Mr. Cyril F. Manning [A] has joined the firm of Messrs. Parfitt and Craig Hall [F], 39 Lombard Street, London, E.C.3 (Mansion House 1951), and ceases to be an associate in the firm of Messrs. Alister MacDonald and Partners.

Mr. Dennis I. Page [A], Mr. Gerald A. Linfield [A] and Mr. James A. D. Cox [A] have entered into partnership under the style of Dennis Page and Partners at 28 Beaumont Street, Oxford (Oxford 58385) where they will be pleased to receive trade literature and catalogues.

Mr. Derek T. Preece [A] has resigned from local government service (Ross and Whitchurch R.D.C.) and commenced in private practice at Hollymount, Bridstow, Ross-on-Wye, Herefordshire (Ross-on-Wye 2481), where he will be pleased to receive trade catalogues.

Mr. David H. C. Pursey [A] has started a practice at 59 Sidbury, Worcester (Worcester 22058), where he will be pleased to receive trade literature.

Mr. K. R. Robinson [A] has taken Mr. Robert Good [A] into partnership under the style of Robinson and Good. The address of the practice remains the same: Larkhill Buildings, St. Georges Road, Bolton, Lancashire (Bolton 114).

Mr. H. L. Shah [A] has commenced in private practice at P.O. Box 139, Dar es Salaam, Tanganyika, East Africa, where he will be pleased to receive trade catalogues.

Mr. D. C. K. Sim [A] has entered into partnership with Mr. J. S. Routley [A] and they are continuing to practise at 4 Great Queen Street, Kingsway, London, W.C.2 (Chancery 4353) under the style of Routley, Sim and Partners.

Mr. John Smith [A] (Serial No. 15252) has resigned as an associate partner in Architects' Co-Partnership and is now practising on his own account from 49 Goodge Street, London, W.1 (Museum 6206) where he will be pleased to receive catalogues and trade literature.

Mr. James Allan Stokes [A] has commenced practice on his own account at No. 17A Fore Street, Totnes, Devon (Totnes 2476), where he will be pleased to receive trade catalogues.

Mr. Brian S. Tait [A] has taken into partnership Mr. Anthony J. Ault [A]. They will practise under the style of Brian Tait and Anthony Ault at No. 19 College Green, Gloucester (Gloucester 23346, 22333).

The practices of Messrs. Arthur Turner and Son and Messrs. Simister and Sutcliffe have been amalgamated under the style of Turner, Son and Partners with offices at Retiro Chambers, Waterloo Street, Oldham, Lancashire (Main (Oldham) 1011, 4324). The partners of the new firm are Mr. Arthur Fairbrother [A], Mr. John Sutcliffe [A] and Mr. John Crothers [A].

Mr. David H. Warner [A] has commenced practice at 4820 Macleod Trail, Calgary, Alberta, Canada, where he will be pleased to receive trade literature.

Hilton and J. M. Wright [AA] (Mr. Hilton Wright and Mrs. J. M. Wright) have taken into partnership Mr. John H. Ingham [A]. The practice will continue under the title of Hilton Wright and Ingham at 11 Campden Hill Road, London, W.8 (Western 8483).

Messrs. Yorke, Rosenberg and Mardall [F/A], of

2 Hyde Park Place, London, W.2 (Ambassador 4521) have taken into associateship (and not into partnership as stated in the March JOURNAL) Mr. K. E. Box [A], Mr. B. Henderson [A], Mr. C. A. Kitchen, Mr. W. G. Lucas [A], Mr. J. S. S. Snell [A], and Mr. J. S. P. Vulliamy [A]. These are associates in addition to Mr. I. B. Wilson [A] and Mr. J. R. B. S-Penoyre [A].

#### CHANGES OF ADDRESS

Mr. K. C. B. Bethell [A] has changed his office address to 82 Albert Street, East Melbourne, Victoria, Australia, where he will be pleased to receive trade catalogues.

Mr. Geoffrey C. Billington [A] has changed his address to 29 Belwell Lane, Four Oaks, Sutton Coldfield, Warwickshire (Four Oaks 443).

Mr. Alan John Burnett [A] has changed his address to 79 Heathcote Drive, East Grinstead, Sussex (East Grinstead 1113).

Messrs. J. E. Dalling and Partners [A/L] have now moved to larger premises in No. 14 Bloomsbury Square, London, W.C.1 (Chancery 4725-6-7).

Mr. B. R. Davis [A] has changed his office address to Architects' Department, Ind Coope (London) Ltd., Cannon Brewery, 160 St. John Street, London, E.C.1, and retains his appointment as chief assistant architect to the parent company, Ind Coope Ltd. His temporary private address is c/o Shorten, 14 Corner Green, Pond Road, Blackheath Park, London, S.E.3.

Mr. Geoffrey Easton [A] has changed his private address to 21 Ascot Court, Grove End Road, London, N.W.8 (Cunningham 7156).

Mr. Stuart Leonard Edwards [A] has moved to Bristol from the London office of Messrs. Russell Diplock Associates as principal architect to their associate practice, Messrs. Frank W. Wills and Sons, 15 Orchard Street, Bristol 1. His private address is also the same as the offices.

Mr. Roy Eggleston [A] has changed his office address to No. 3 Grange Crescent, Sunderland, Co. Durham.

Mr. Noel Anthony Goss [A] has changed his address to 65 Frederick Road, Wyld Green, Sutton Coldfield, Warwickshire.

Mr. S. P. Jordan [A] has changed his address to 22 Queen's Gate Gardens, London, S.W.7 (Knightsbridge 8418). Representatives by appointment only.

Mrs. Kathleen M. Llewellyn-Jones [A] has changed her address to P.O. Box 30173, Nairobi, Kenya, East Africa.

Messrs. Dudley Marsh, Son and Partner [A/L] of No. 6 Dane John, Canterbury have opened a branch office at 8 and 9 Cannon Street, Dover (Dover 447), where they will be pleased to receive trade catalogues.

Mr. S. B. Mendelsohn [A] has changed his address to 48 Rossmore Court, Park Road, London, N.W.1 (Paddington 6591).

Mr. T. P. Morris [A] has changed his address to c/o Central Mortgage and Housing Corporation (Arch. and Planning Division), Montreal Road, Ottawa, Ontario, Canada.

Mr. David Mylne [A], practising as Walter Duns, Langtongate, Duns, Berwickshire, has opened a branch office at 112 Castlegate, Berwick-upon-Tweed, where he will continue to practise under the style of Walter Duns and will be pleased to receive trade catalogues, particularly of B.S.S. sizes.

Messrs. Oluwole Olumuyiwa and Associates [A] have changed their address to 48 Docemo Street, Lagos, Nigeria (Lagos 21726) where they will be pleased to receive trade literature relating to schools, hospitals and industrial buildings.

Mr. Lincoln Page [A] has changed his address to 191 Shepherd's Lane, Dartford, Kent.

Mr. Bonington Parker [A] has changed his business address to 414 Pockets Building, 50 Stanley Avenue, Salisbury, Southern Rhodesia, where he is practising in association with Messrs. A. Lloyd Spencer and Partners [F/A].

Messrs. Sainsbury and Chamberlain [L/F] continue to practise at 14 Cross Street, Reading, Berkshire, but the telephone number has been changed to Reading 50446-7.

Messrs. K. Scott and Partner [A] of 29 Oswald Road, Scunthorpe, Lincolnshire (Scunthorpe 5486) now have an office at 7 York Place, Scarborough, Yorkshire, where they have acquired the practice of the late Mr. A. K. Clark [L] (Messrs. Frank Baker and Clark). The Scarborough office

will be carried on under the style of Frank Baker, Clark, Scott and Partner.

Mr. Jan van der Meulen [A] has changed his address to Rotenberg 50 1/2, Marburg/Lahn, Germany.

Mr. David H. Warner [A] has changed his address to Suite 8, 807 Royal Avenue, Calgary, Alberta, Canada.

Mr. Paul White [A] has changed his address to 170 High Street, Guildford, Surrey (Guildford 66198).

Mr. Philip J. Whittle [A] has changed his address to 27 Marsh Lane, Mill Hill, London, N.W.7 (Mill Hill 1998).

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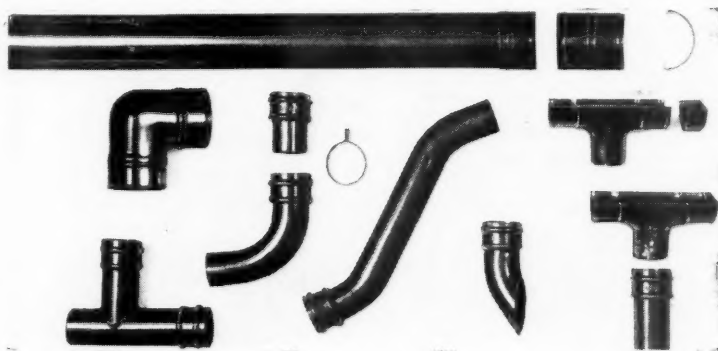
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# Motopia

## A Glass Age Development Committee Study

### 4—THE COMMERCIAL CENTRE

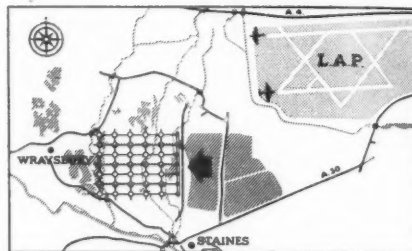
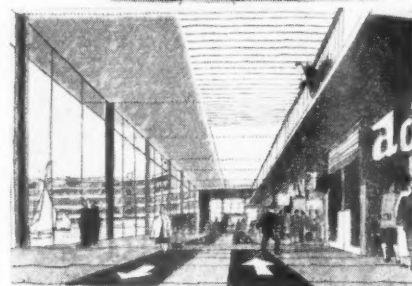
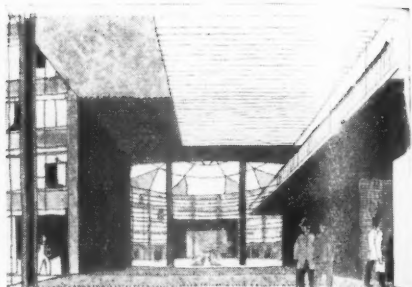
A shopping centre of approximately 400,000 square feet on two levels will be a feature of the Town Centre of Motopia, which altogether will allow for shopping and entertainment for 100,000 people, office accommodation for 3,000 and a few light and service industries. There will be covered roof-parking for 3,000 cars in two levels with open roof accommodation for 1,500 cars.

#### ILLUSTRATIONS SHOW

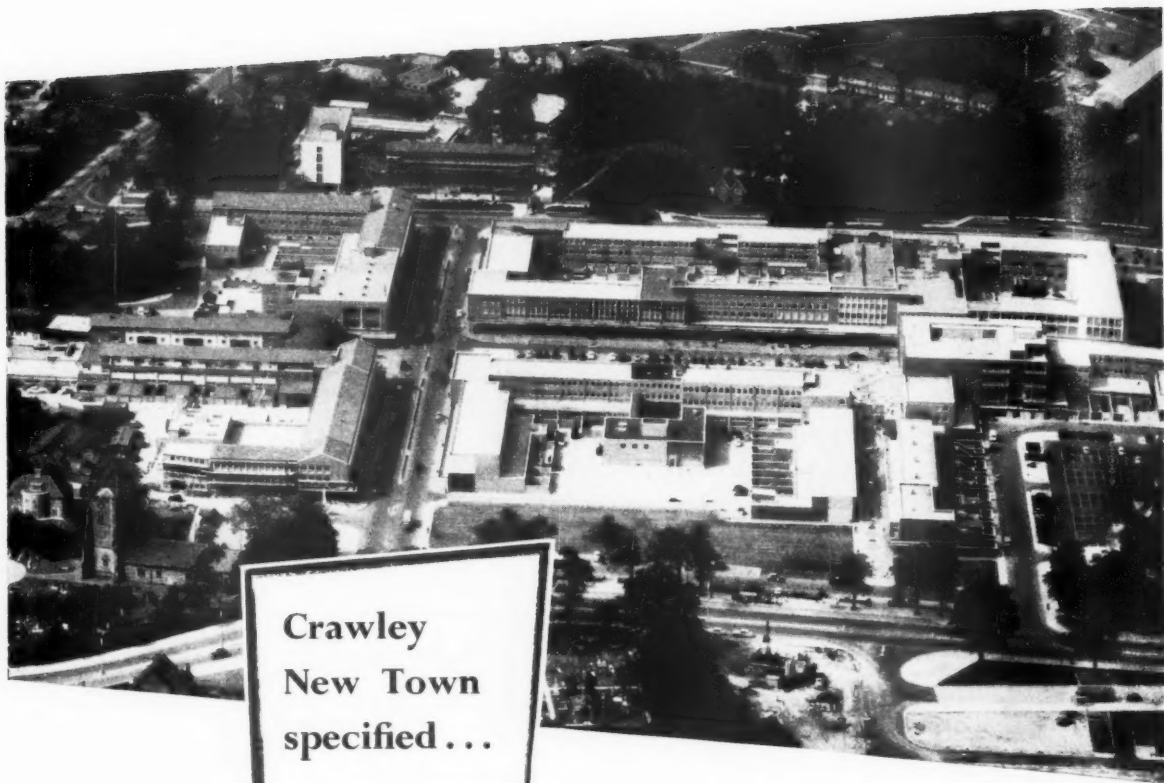
- 1 One of the circular halls in the 'Great Stoa'—the two-level shopping arcade, which is linked with the car parks by vertical paternoster lifts.
- 2 Looking along the shopping arcade, showing the moving pavements for pedestrians.
- 3 Site plan of Motopia.
- 4 The access to Motopia from the main road, showing the site of the shopping centre and car parks.
- 5 The large illustration shows the view from one of the shops.

Motopia is the fourth post-war study prepared by the Glass Age Development Committee, consisting of Jellicoe, Ballantyne and Coleridge, F.A.R.I.B.A., Edward D. Mills, F.R.I.B.A., and Ove Arup and Partners, and convened by Pilkington Brothers Limited.

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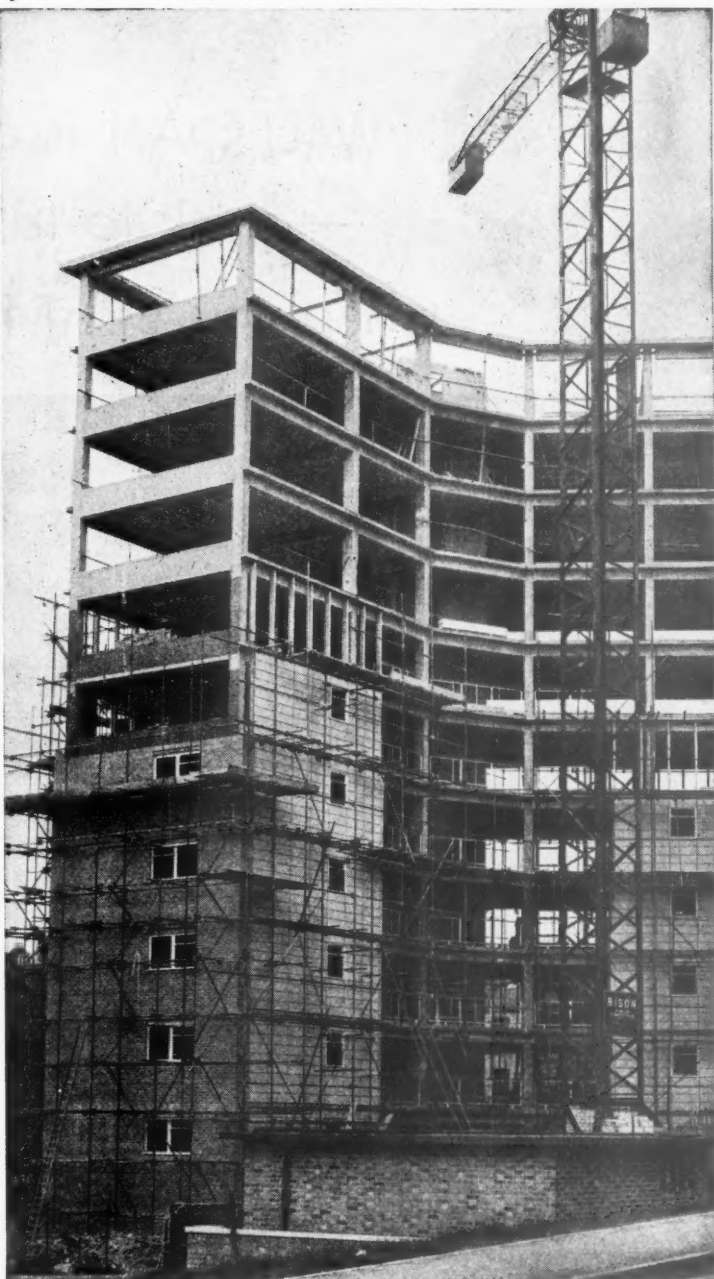
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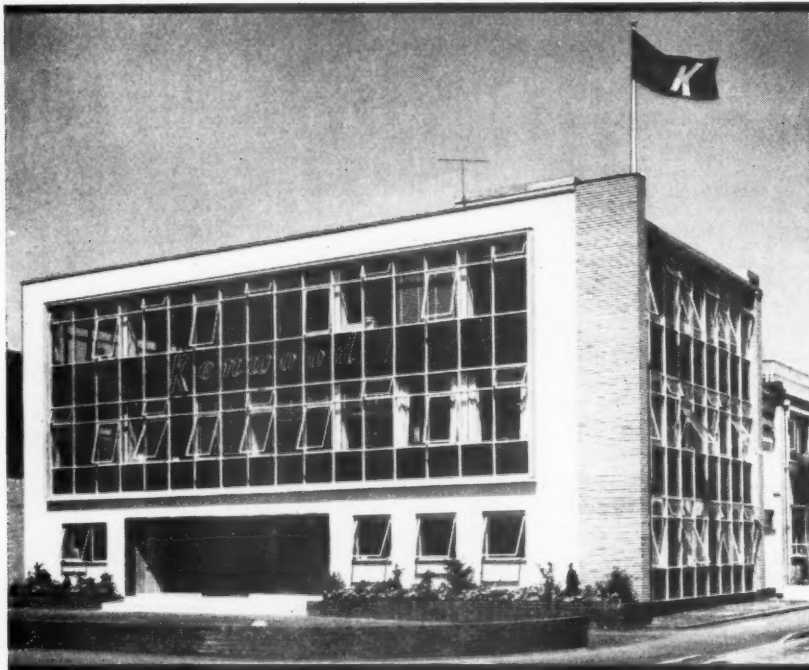
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*Architects:* Malcolm Peck,  
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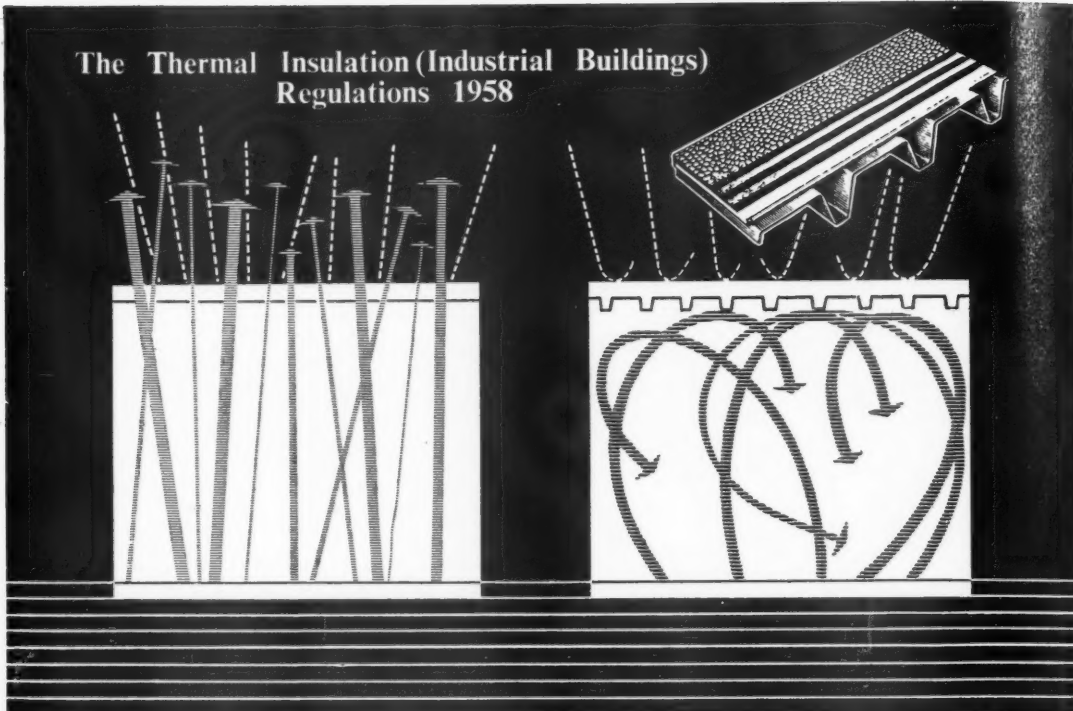
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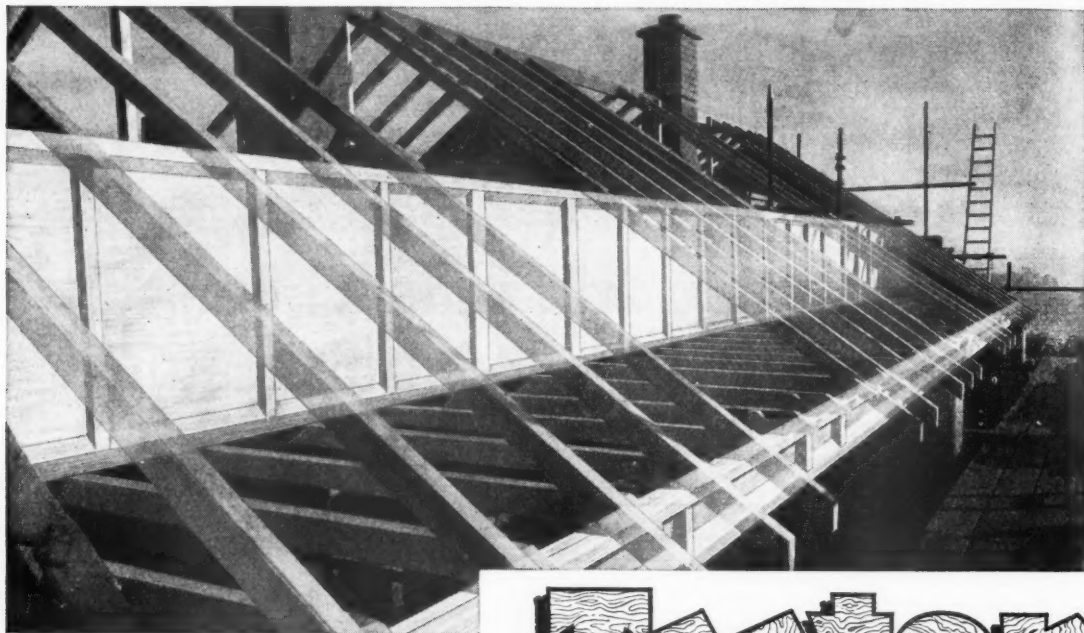


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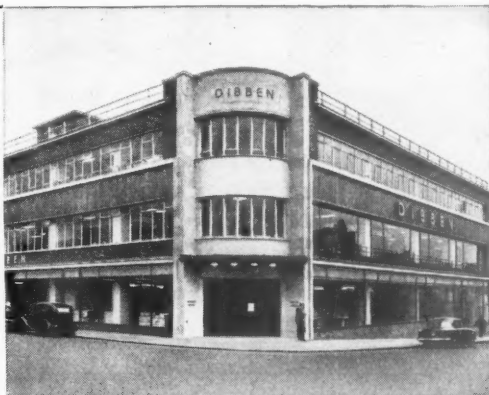


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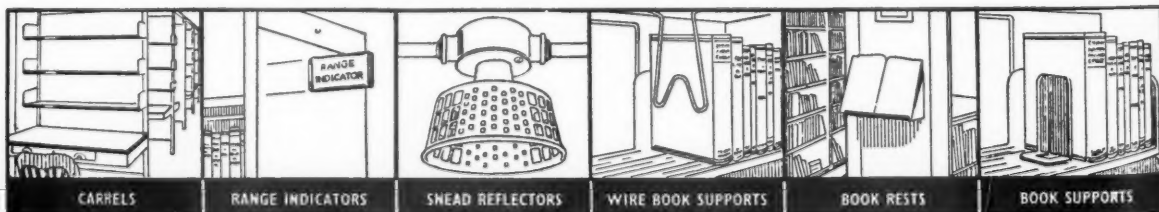


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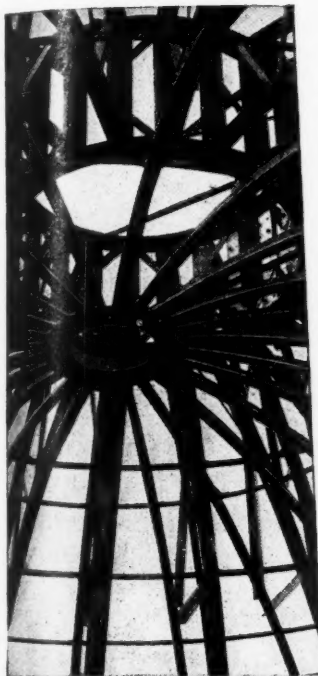
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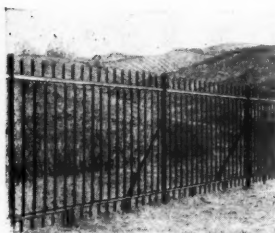
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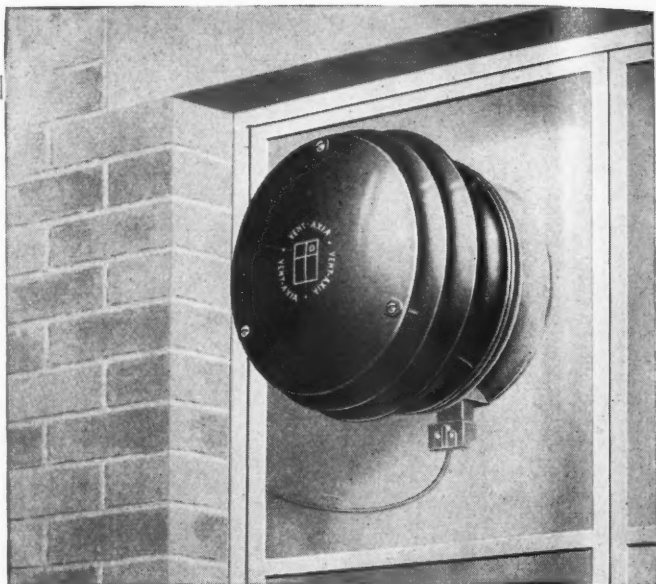


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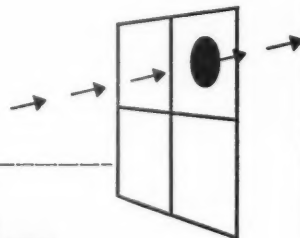
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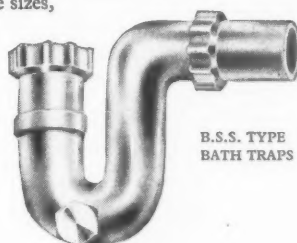
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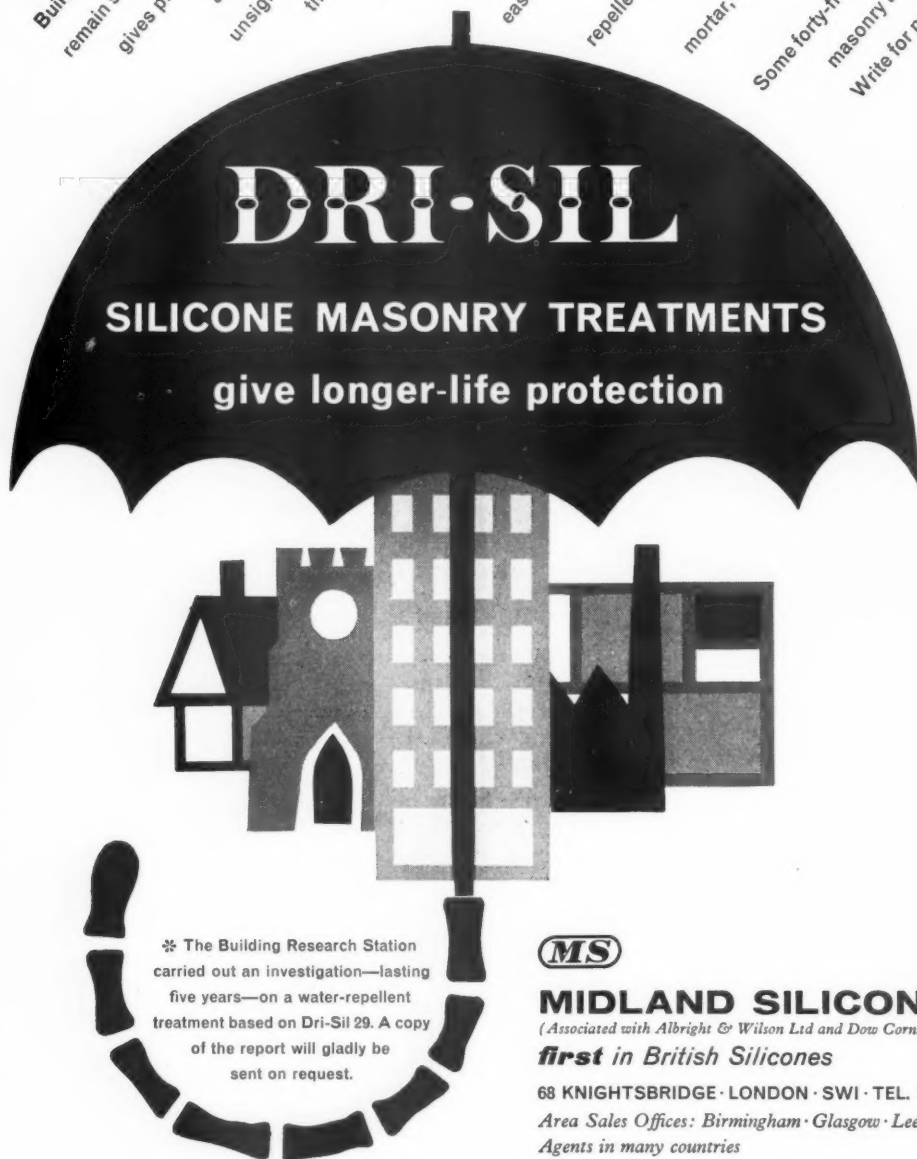
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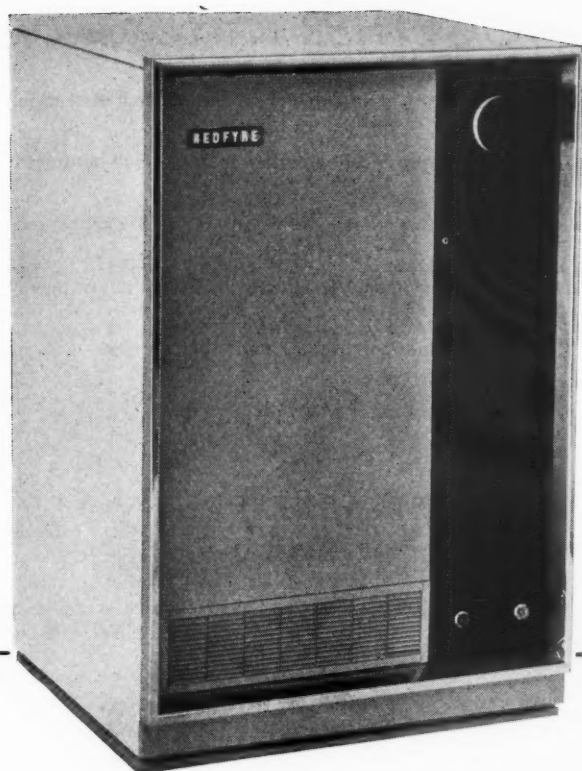
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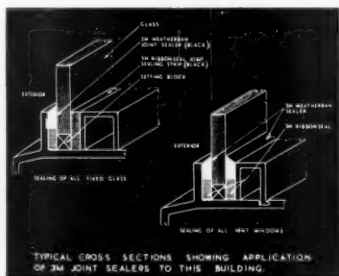
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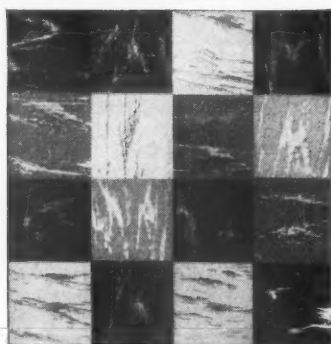
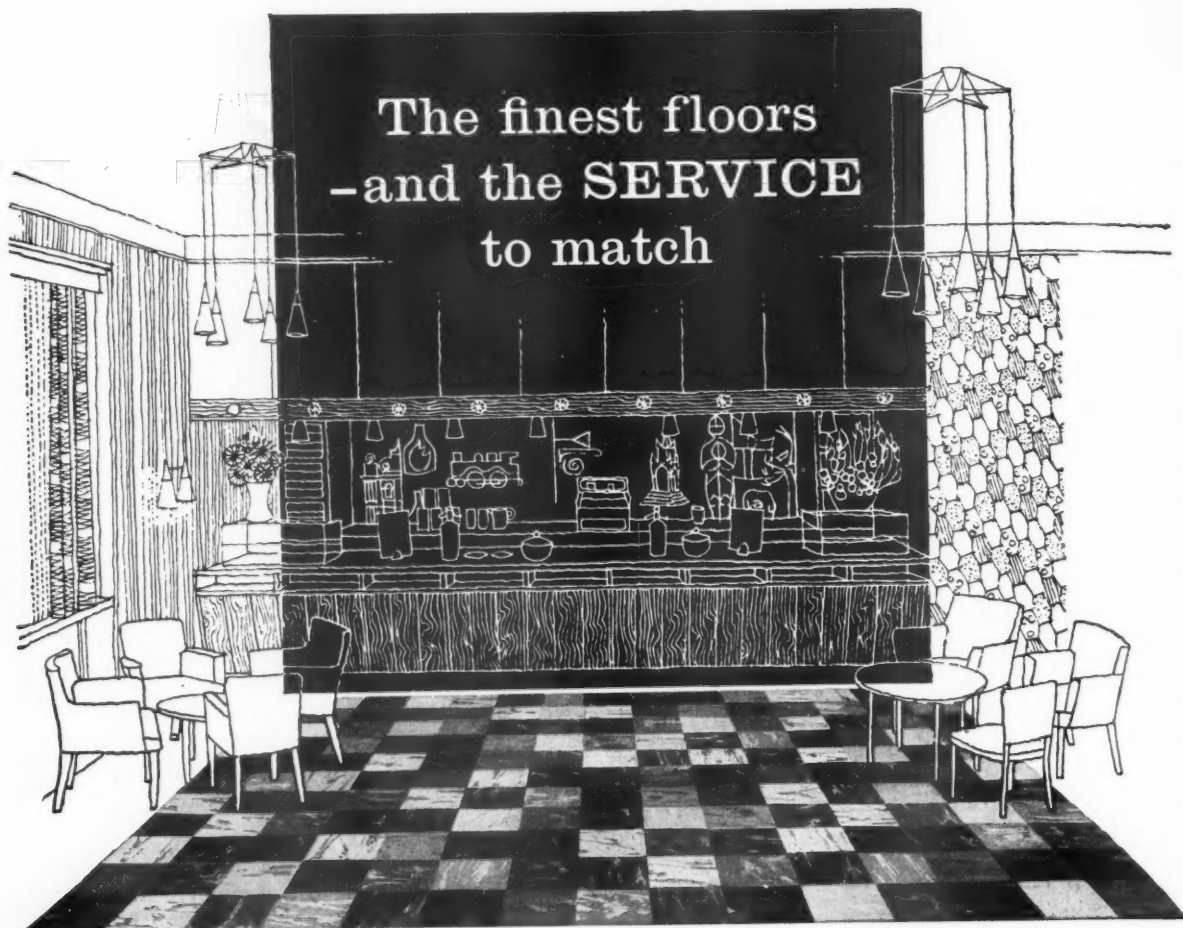
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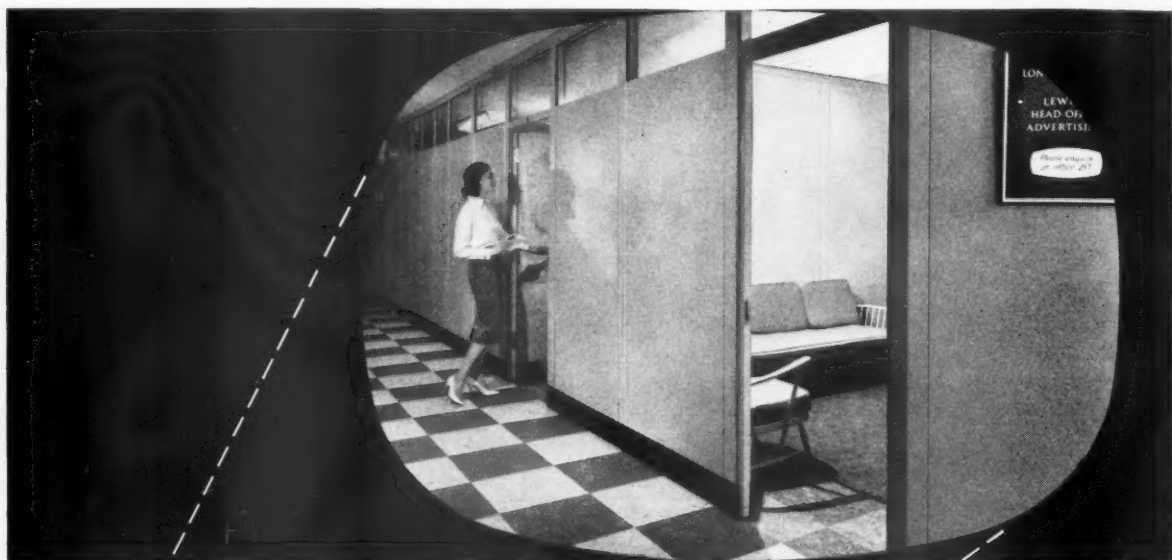
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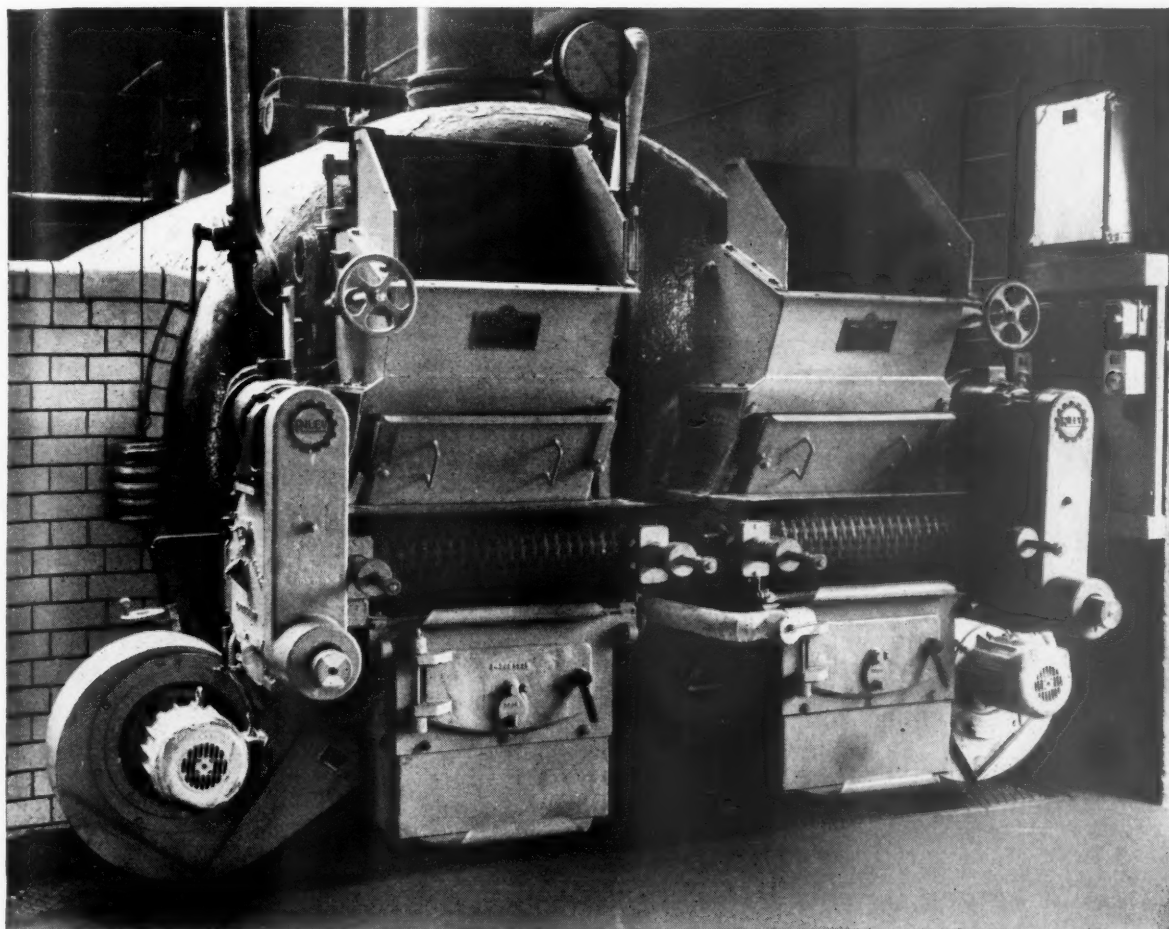
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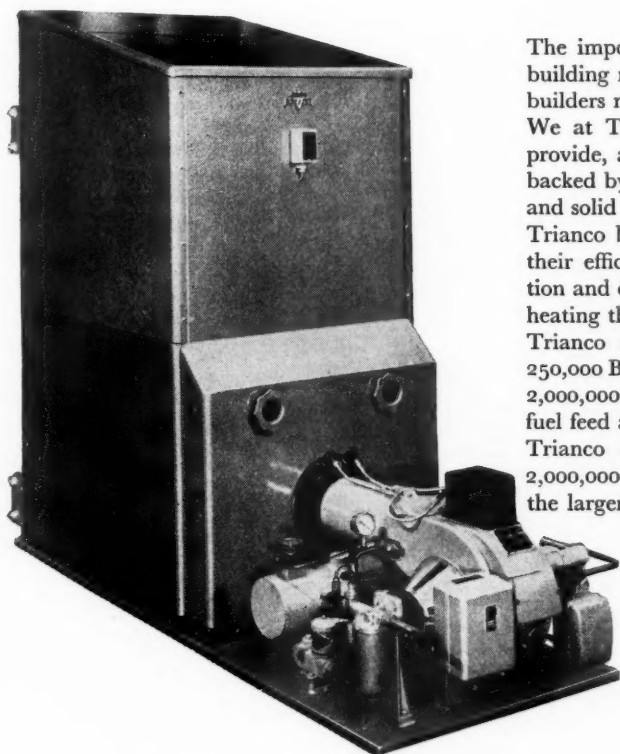
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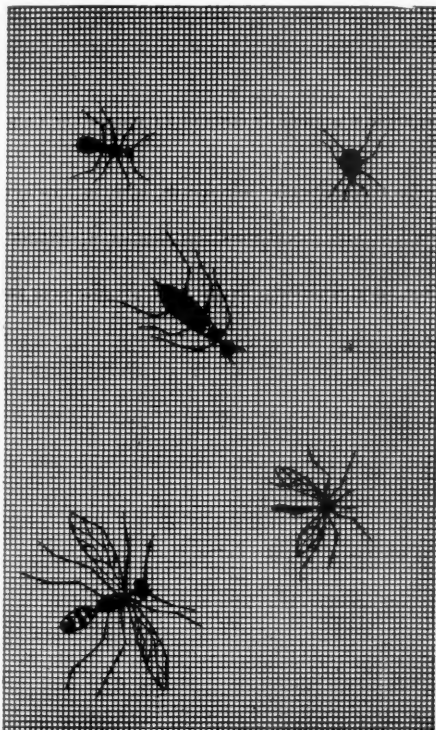
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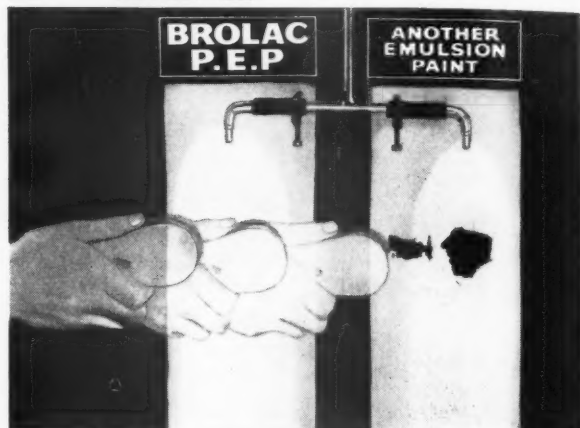
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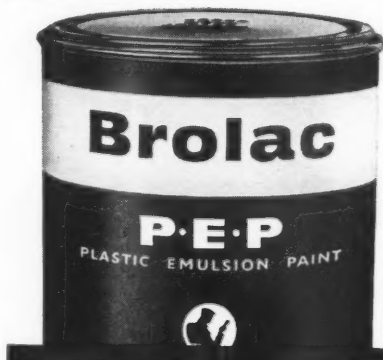
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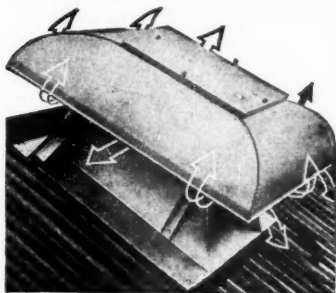
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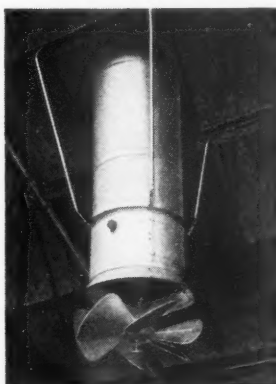
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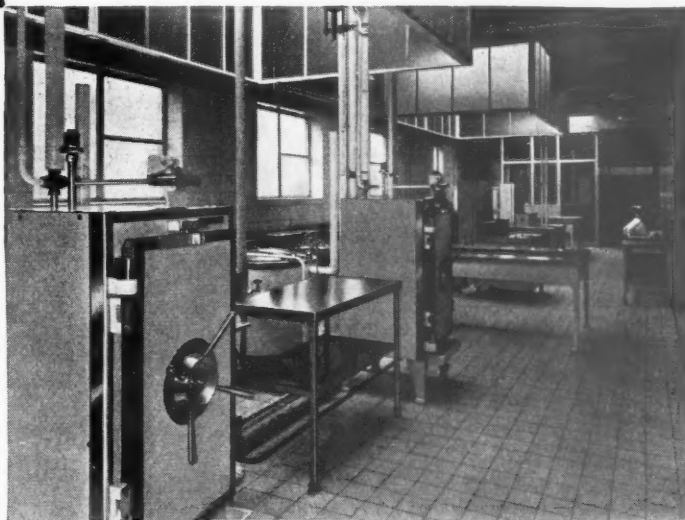
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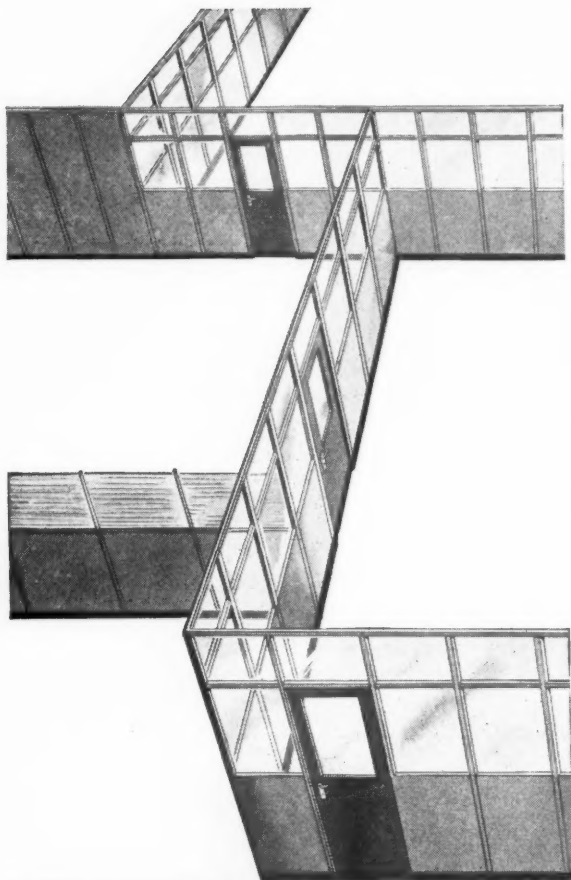


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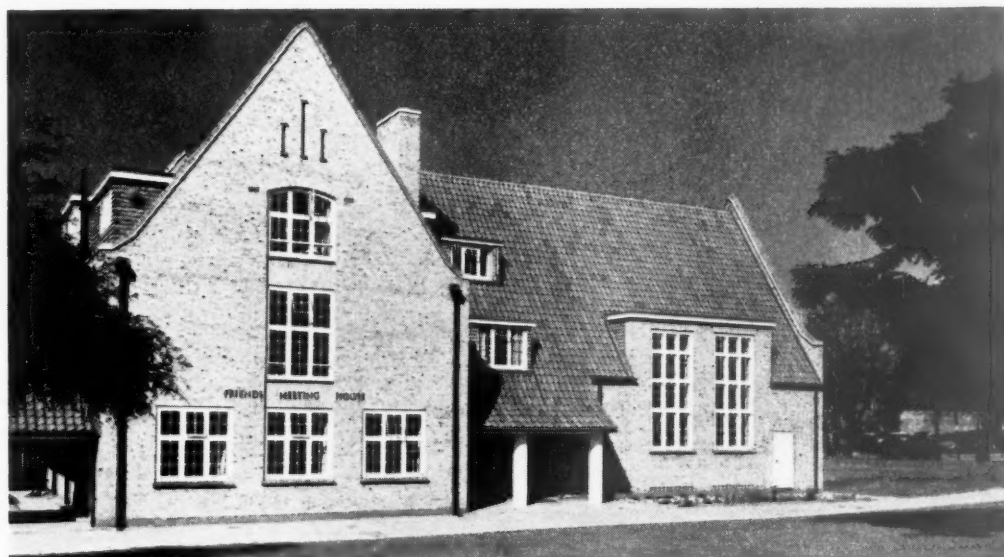


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